Profile of the British Columbia High Technology Sector

2003 Edition

A joint project of BC STATS and the
BC Ministry of Competition, Science and Enterprise

BRITISH COLUMBIA

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1 Highlights

High tech continued to contract in 2002

For the second straight year, the high tech sector in BC was outperformed by the BC economy as a whole.

High tech GDP down 2.0% to $3.4 billion...

In 2002, constant dollar GDP generated by the high technology sector was $3.4 billion, [1] down 2.0% from 2001. The national decline was 1.6%.

...less than overall BC growth

The BC economy rebounded with growth of 2.1% in 2002, with GDP climbing to $116.9 billion after a sluggish performance a year earlier where GDP grew only 0.9%.

The high tech sector generated 2.9% of the province's GDP in 2002.

Services continued to expand

High tech services continued to grow (+4.8%) for the third straight year despite the loss in manufacturing (-15.6%).

Employment down 1.9% to 44,690

High tech sector employment dropped to 44,690 workers, down 1.9% from 2001. Employment in all industries[2] grew 1.1% (to 1,612,740).

$2.3 billion in wages & salaries

In 2002, workers in the high tech sector earned $2.3 billion, virtually the same (+0.4%) as 2001. More than half ($1.4 billion) was in the computer and engineering service industries.

Over 5,300 high tech establishments

There were 5,339 establishments with employees in the industries of the high tech sector in 2002, 113 less than in 2001. Computer and engineering services are the largest single industry in the sector, with 4,279 establishments.

High tech exports: $685 million

Exports of high tech commodities from BC fell to $685 million in 2002, down 8.5% from 2001. This was the second straight year of decline.

High tech imports decreased 8.8%

High tech commodities destined for use in BC fell 8.8% to $4.1 billion in 2002. This was the first decline in at least a decade, but the total value of high tech imports was still almost six times that of exports.

Revenues fell to $6 billion, down 1.4% since 2001

High tech sector revenues also slipped in 2002. Manufacturing (-11.9%) led the decline while services increased (+4.5%) to partially offset this loss.

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[1] GDP at basic prices.
[2] Excluding self-employed workers, and workers in commercial fishing and agriculture.

2 Introduction

The BC high technology sector

This Profile of the High Technology Sector is part of an ongoing project to monitor the growth and evolution of the high technology sector in British Columbia. The technological advancements of humanity in the last two hundred years (or even the last twenty years) have dramatically altered almost every aspect of the world economy and culture. The role of technology in the economy is clearly a vital area for study. This publication advances that study by evaluating the economic contribution of firms that produce high technology goods and services in British Columbia. This covers the GDP, revenue, employment, exports, etc. generated by firms in selected high technology industries.

The designation of a high technology sector among the other industrial sectors of the economy provides a very useful analytic tool. This is based on the premise that high technology firms behave in a way that allows them to be understood as a group, and that programs or policies can be tailored to their needs.

The sector definition has changed

Since the inception of the Profile reports in 1996, the statistics on the high technology sector have been built up from information about sub-industries, mostly obtained from Statistics Canada. These sub-industries, such as Aerospace or Engineering Services, are categories developed and maintained by Statistics Canada. The categories can become out of date, and are revised approximately every ten years. The data collection system is then converted to the new categories, a process that takes several years.

The latest system of categories (NAICS – the North American Industry Classification System) was developed in 1997. The adoption of NAICS-based industry definitions made it necessary to revisit the definition on which the high-tech estimates were based, as many of the industry groupings previously used were no longer available. During 2001, BC STATS developed a new definition of the high technology sector that was based on NAICS industry categories. The process of developing the criteria for including or excluding specific industries in the definition is described in detail in a paper that can be found on the BC STATS website at www.bcstats.gov.bc.ca/releases/info2001/in0138.pdf.

The definition originally chosen (based on the theoretical considerations described in the above-named paper) proved to be only a starting point, as much of the information required to compile high technology statistics was not available at the required level of detail. A working definition, based on availability of data, was adopted in order to prepare the estimates presented in this paper.

BC Stats switched to a NAICS-based definition of high technology with the 2002 edition of the Profile report. Following the publication of the 2002 edition of the report, Statistics Canada released new NAICS-based data for the pre-1997 period. This information

has been incorporated in the 2003 edition of this report, and as a result, some of the historical data has been revised.

The following table shows the sector components that have been used in constructing the current report. The table lists the industries that are defined, for the purpose of the present report, to constitute the high technology sector in British Columbia.

Industries in the High Technology Sector

NAICS	Industry
Manufacturing	
325189	Other Inorganic Chemicals
325410	Pharmaceutical and Medicine
333310	Commercial and Service Industry
334110	Computer and Peripheral
334210	Telephone Apparatus
334220	Radio, Television Broadcasting & Wireless Communications Equipment
334290	Other Communications Equipment
334310	Audio and Video Equipment
334410	Semiconductor and Other Electronic Components
334511	Navigational and Guidance Instruments
334512	Measuring, Medical and Controlling Devices
334610	Manufacturing and Reproducing Magnetic and Optical Media
335315	Switchgear and Switchboard, and Relay and Industrial Control Apparatus
335910	Battery
335920	Communication and Energy Wire and Cable
335990	All Other Electrical Equipment and Component
336410	Aerospace Products and Parts
339110	Medical Equipment and Supplies
Service Industries	
511210	Software Publishers
514210	Data Processing
541330	Engineering
541510	Computer Systems Design and Related

Note:
For the purposes of this report, the manufacturing NAICS industries are grouped together as "Manufacturing." Within this, details are reported for Pharmaceuticals and Aerospace, with the remaining industries covered under "other." Services are similarly grouped, with detail for "Information services" (NAICS 511210 plus 514210) and "Computer and engineering services" (NAICS 541330 plus 541510).

The report includes the latest information available as of October 2003. New GDP figures released by Statistics Canada in early November could not be incorporated into the report at the time of publicaiton. All data in this report refer to the calendar year 2002 except exports of high technology services, which are only available to 2001.

Readers should note that graphs and text in this publication only deal with the highlights of the information that has been collected. The data tables in the final sections contain additional detail that can prove valuable. These tables extend from as far back as 1990 for the trade data, or 1992 for all other data. Note that the definition of what constitutes a high tech commodity has been revised

and that trade data published in this edition are not comparable with data published in earlier editions. For more details, see appendix B, "Defining High Technology Commodities."

"Input Indicators of the BC High Technology Sector, 2003"

In addition to updating and developing this "Profile", BC Stats has developed other measures of the high technology sector. The high technology sector, and the infrastructure network that surrounds it, is a complex system with many players and interactions. The "Indicators" report provides measures of the inputs to the high technology sector and the overall climate of innovation. It covers thirty-two separate types of activity with respect to high technology in the educational, business, government, external, and labour sectors for the years as far back as 1990. Whenever possible, the indicators are presented in comparison to other provinces, which serve as benchmarks for the situation in our own province.

3 Profile and Trends I
The High Technology Sector's Contribution to the BC Economy

Two types of industries

Throughout this report, two types of industries within the high tech sector are discussed. These are service and manufacturing industries.

The high tech service industries–computer and engineering services, and information services–do not make a tangible good. Instead they provide expertise, such as software creation, information technology system management, the planning and design of a bridge, or the analysis of a blood sample for a medical diagnosis.

The manufacturing industries are those that take raw materials, or the products made by other manufacturing industries, and make new products. High technology firms include aircraft construction (which includes aerospace manufacturing), computer and related products, pharmaceutical, and other types of manufacturing.

The place of the high technology sector in the BC economy

In terms of growth, the high technology sector has outpaced the BC economy as a whole over the past decade.

Over the last decade, BC's high technology sector has expanded at three times the pace (on average) of the economy as a whole. Despite this rapid growth, the sector remains a small part of the whole economy. In 2002, high technology industries generated just under three percent of provincial GDP and employment, and accounted for four percent of wages and salaries. Almost four percent of all business establishments in the province were in the high technology sector. These proportions may seem relatively insubstantial, but BC is maturing into a diverse economy where no single industry dominates economic activity. Sectors of similar size to the high technology sector include the agriculture and related industries and accommodation and food services. The financial, insurance and real estate and leasing sector[1] generates the greatest contribution, with 23.2% of total GDP.

The general structure of BC's high technology sector

The high technology sector in BC is made up of many individual industries that can be categorized as either a manufacturing or a service-providing industry. In British Columbia, service industries dominate every measure of high technology, from GDP to employment. By the measures presented in this report, these industries account for between sixty and eighty percent of the sector.

[1] Including owner-occupied dwellings.

Constant dollar GDP

GDP is a measure of value added, which is essentially the difference between the cost of the material inputs and purchased services used in production and the price at which a good or service is sold.

Two ways of reporting GDP are in current and constant dollars. Constant dollar GDP is the best measure for understanding and illustrating trends over time.

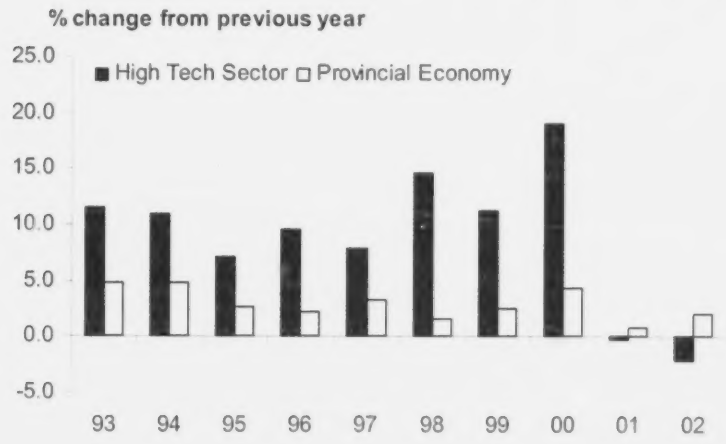
The "constant dollar" expression means that the GDP values have been adjusted to remove the effect of price changes (i.e., inflation and deflation) over time. Reporting data in constant dollars is one way of showing the change in the output of an industry. For example, if a high technology manufacturing firm sells the same number of widgets from one year to the next, the outputs have not increased and thus, all else being equal, the **constant** dollar GDP would not change. But if that firm charged an extra 2% for each widget sold in the second year, its **current** dollar GDP would increase by 2%.

Thus constant dollar GDP tells us the real change in output. This is why constant dollar GDP is sometimes referred to as "real GDP."

High technology sector GDP lags behind rest of economy

High technology sector GDP fell for the second straight year in 2002, to $3.4 billion (in 1997 constant dollars). Conversely, BC's real GDP grew 2.1%, rebounding from a lacklustre 2001, where the economy expanded only 0.9%. The poorer showing by the high technology sector is uncharacteristic of its performance over the last decade. From 1992 to 2002, the high technology sector grew at an annual average compound rate of 8.8%, three times the provincial average. As a result, high technology now accounts for 2.9% of BC's GDP, up from 1.7% in 1992.

High technology GDP growth outperformed BC economy on average over the past decade



The falling high technology sector GDP over the last couple of years has been due to the declining fortunes of the high tech manufacturing sector, particularly manufacturers of computers and other electronics. From 2000 to 2002, the real GDP of high tech manufacturing dropped over a half billion dollars, with the decline in the computer and other electronics industries exceeding even that. The high tech services sector, on the other hand, has experienced robust growth over the last few years in British Columbia, largely offsetting the drop in manufacturing GDP.

BC GDP (constant 1997 dollars), 2002

	$ million	% change
High technology manufacturing	988	-15.6
High technology services	2,446	4.8
High technology sector: total	**3,434**	**-2.0**
BC total	**116,888**	**2.1**

BC's high technology services sector grew 4.8% in 2002, partially offsetting the downturn (-15.6%) in manufacturing.

Due to the variety of definitions of "sectors," it is impossible to say that high technology has been the fastest growing sector in the economy over the last decade, but it can safely be said that it has been close to the top in GDP growth for most of the decade, excluding the last couple of years, of course. Most sectors of the economy outperformed high technology industries in 2002.

BC's constant dollar GDP growth behind national rate

Canadian high technology real GDP also fell in 2002; however British Columbia's performance still lagged the national average. Canadian high tech GDP, in constant dollars, declined 1.6% to $47.5 billion. Out of the four largest provinces, only Alberta (+1.8%) recorded an increase in 2002. Quebec, at –1.5%, was slightly better than the national average, while Ontario (-2.3%) fared even worse than BC.

BC's high technology GDP growth lags behind the national average.

High Tech GDP (constant 1997 dollars), 2002

	$ million	% change
British Columbia	3,434	-2.0
Alberta	3,788	1.8
Ontario	22,530	-2.3
Quebec	15,352	-1.5
Canada	**47,498**	**-1.6**

High technology services grew in all provinces, and manufacturing dropped, even in Alberta. This is the same pattern exhibited in 2001, except the declines were much steeper between 2000 and 2001. For all regions except BC, the growth of the high tech service sector was good enough to boost the overall high technology GDP performance over that achieved in 2001. British Columbia's

high tech manufacturing sector recorded by far the most significant drop, falling 15.6%, compared to only a 6.9% decline in Ontario, the next worst performer. In Alberta, high tech manufacturing GDP edged down only 0.5%.

Price changes: comparing current and constant dollar GDP

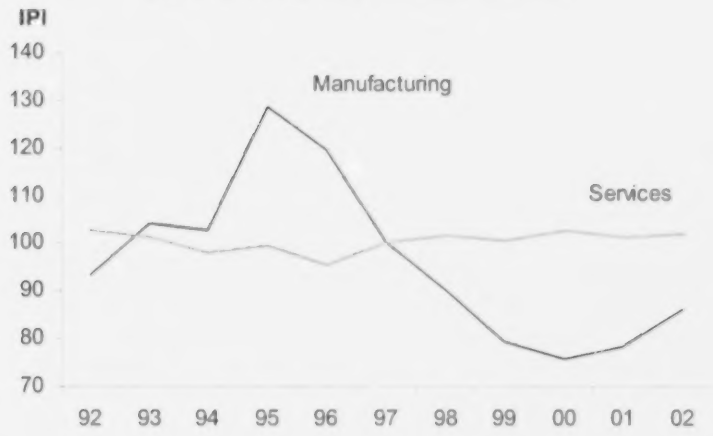
Comparing the constant and current dollar measures reveals the effect of price changes on the value of an industry's outputs and inputs. In the high tech sector this is particularly important, since some industries have experienced price deflation in recent years as rapid change in technology has driven prices down (for example, the price of personal computers has fallen substantially even though they are now more powerful than they used to be).

There was inflation in the high tech sector in 2002

In BC, in 2002, high tech GDP measured in current dollars grew 1.9%, compared to a 2.0% drop in GDP measured in constant dollars. This indicates that there was significant inflationary pressure in the industry. Although the service sector experienced some inflation, most of the price hikes occurred in the manufacturing sector where current dollar GDP fell only 7.4% compared to a 15.6% drop in real GDP. High technology manufacturing saw a steep decline in prices from 1995 through 2000 before starting to edge up once again starting in 2001. Prices in the service sector have remained relatively stable over the last decade.

Both manufacturing and service industries experienced some inflation in 2002

After a sharp decline through the latter half of the nineties, prices in high tech manufacturing have increased over the last couple of years



Note: IPI is the GDP implicit price index

Employment in the high tech sector

The measure of employment used in this report is based on Statistics Canada's Survey of Employment, Payroll and Hours (SEPH). This employer survey provides a wealth of detail about employment, wages, and hours in a large number of industries. However, because it is an employer survey, the SEPH data does not include self-employed workers, and workers in commercial fishing, agriculture, and some services.

The data from SEPH give the average number of workers in an industry through the course of the year. If an industry is highly seasonal, the peak number of workers is offset by those months where there are fewer workers. A full-time worker is accorded equal status with a part-time worker; no attempt is made to measure the number of "person years" or "full time equivalents."

High technology employment was weak in 2002

The high tech sector employs 3% of BC's workforce

Employment in BC's high technology sector tapered off in 2002 after expanding rapidly over the past decade. High tech employment dropped to 44,690 workers, down 1.9% from 2001. Total employment in the province climbed to 1.6 million (+1.1%).[2] As a result, the high tech sector's share of the BC total dropped slightly, to just under 3%. Approximately 860 high tech jobs disappeared in 2002.

Employment, 2002

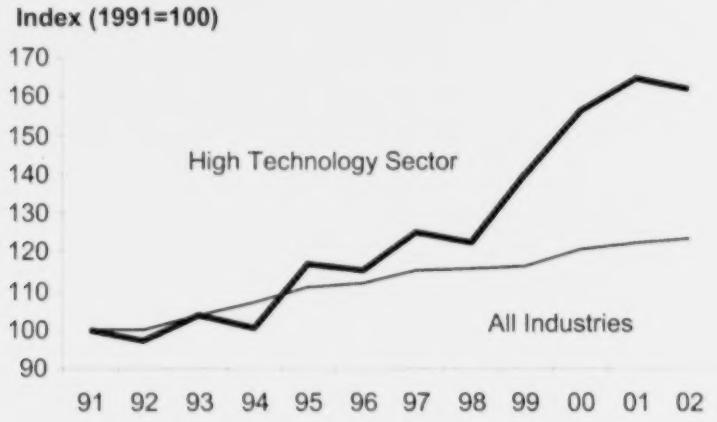
	Workers	% change
High technology manufacturing	14,080	-10.5
High technology services	30,610	2.7
High technology sector: total	**44,690**	**-1.9**
BC total	**1,612,740**	**1.1**

High tech's share of total employment has increased by almost 62% since 1991

Since high tech employment growth has outpaced the expansion of overall employment in most years over the last decade, the downturn in the high tech sector last year does not adversely affect the long-term trend. This long run of growth has already caused the number of workers in the high technology sector to increase by almost 62% since 1991. The sector's long-term growth remains impressive when compared to overall employment, which increased by only 24% over the same period.

[2] Employment data are based on Statistics Canada's SEPH. The more frequently cited Labour Force Survey (which includes self-employed workers, and workers in commercial fishing and agriculture) reports that for 2002, employment in BC actually increased 1.6%.

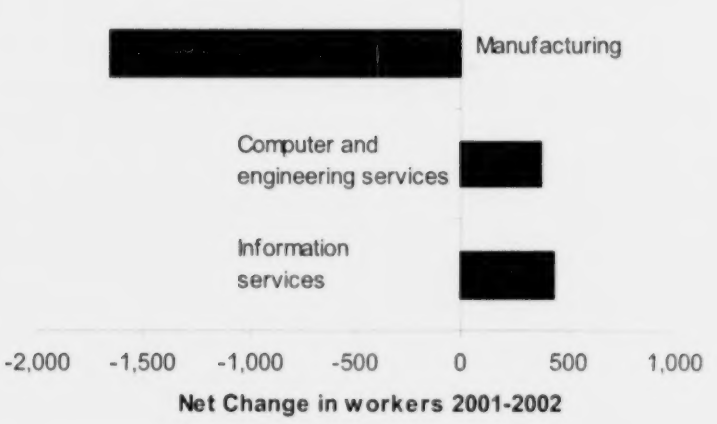
High technology employment grew faster than total employment over the last decade



Computer and engineering services account for over half of all high tech employment

Manufacturing played a key role in the decline in high technology employment in 2002. Computer and peripheral manufacturing, communications equipment manufacturing, semiconductor and other electronic component manufacturing, together with measuring, medical and controlling devices manufacturing all experienced hard times. Approximately 1,500 jobs in these industries vanished. In contrast, the service industries provided strong support for overall high technology sector employment in 2002. Computer and engineering services together with information services led the way (+2.7%) adding 790 new employees to the high tech sector.

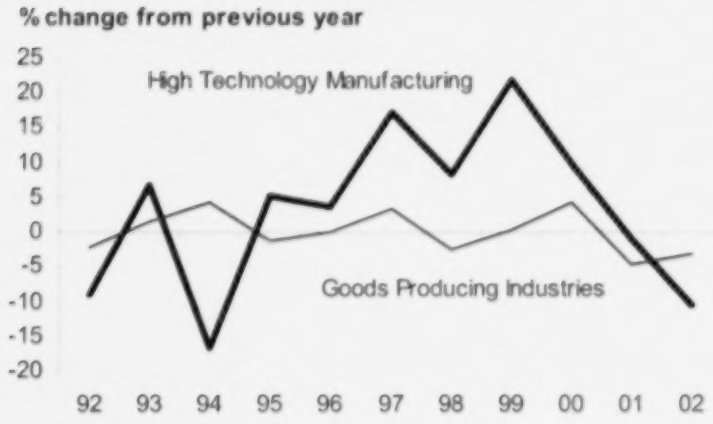
Services industries offset high tech job loss in manufacturing industries in 2002



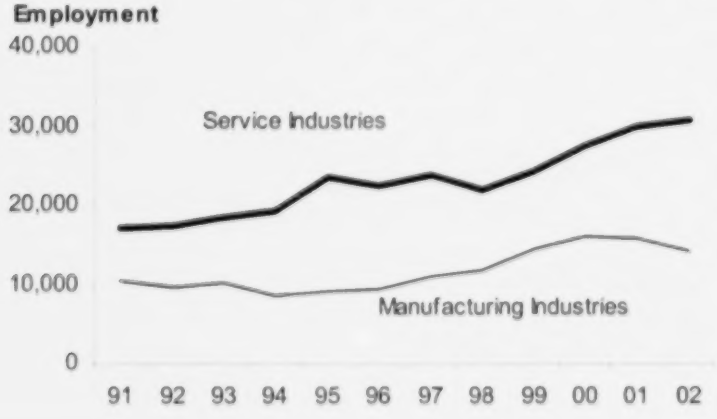
Employment in high technology manufacturing industries has been showing more turbulence than in the goods producing sector as a whole. Due to the fact that high tech industries are more sensitive to overall economic conditions, investment and market confidence, the number of jobs in those industries displays a sharper

growth or decline pattern than the traditional industries, whose annual percentage changes were within ± 5% throughout the decade.

High tech manufacturing industries are less stable than traditional goods producing industries



Employment in high tech services has increased 78.6% since 1991. This expansion has been due to consistent growth in the computer and engineering industry, and substantial job growth in the information services industry, particularly during the last four years. The number of jobs in the information services industry has grown over 230% since 1991, and now accounts for nearly a fifth (19%) of total employment in high technology services. High tech manufacturing has not experienced the same strong growth as high tech service industries have over the past decade.



BC's share of Canadian high technology employment is growing

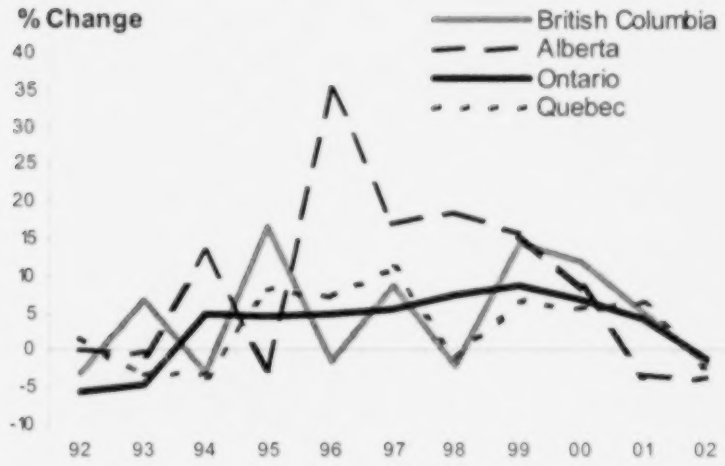
High technology employment shrank all across Canada

British Columbia was not the only province where employment in the high tech sector shrank in 2002. In fact, the decline in BC was similar to the national average (-1.9%). Alberta experienced its greatest high tech job loss since 1991 (-4.1%). Another province that underperformed the Canadian aggregate is Quebec, where high tech jobs slumped 2.4% in 2002.

Since 1991, BC has increased its share of high tech employment in Canada by one percentage point, and Alberta has increased its share by three percentage points. For both BC and Alberta, their share of Canadian high tech employment is lower than the share of total employment. BC has 13% of the country's employment but only slightly over 9% of high tech employment. Alberta has 9% of the high tech employment, which is also significantly lower than the 11% share of overall employment both within and outside the high technology sector. Ontario and Quebec have seen their shares of the Canadian high tech total drop to 45% and 29% respectively.

High tech employment growth is steadiest in Ontario

BC and Alberta have more volatile employment growth in their high tech industries than the East



Measuring labour productivity changes: comparing real GDP growth with employment changes

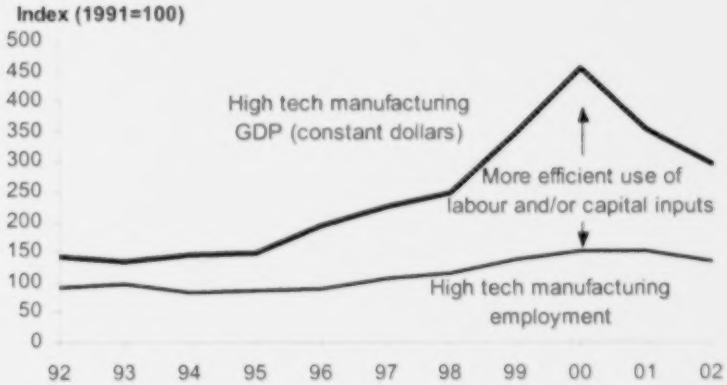
Examining the difference between constant dollar GDP growth (i.e., real changes in output) and employment gives an indication of changes in labour productivity. If real GDP growth is outpacing increases in employment, this shows that individual workers are producing more or that capital is being used more efficiently. However, what these data do not show are the extent to which the changes in productivity may be due to changes in capital or in the hours of work.

Productivity in high tech manufacturing slipping

Productivity in high tech manufacturing is falling after substantial growth through the 90s

Over the last decade, real GDP in high technology manufacturing has more than doubled, while employment grew by just under 50%. This indicates that high technology manufacturing industries have managed to substantially increase their output per worker (i.e., productivity) over the last ten years. However, after reaching a peak in 2000, productivity has been slipping in the last couple of years, as reductions in output have not been matched with cutbacks in employment.

High tech manufacturing in BC achieved significant gains in productivity through the 90s, but has been slipping lately



The high technology service sector, on the other hand, has only more recently begun to see significant productivity gains. Since 1997, high technology services employment has climbed 29%, but constant dollar GDP of services jumped 56%. In contrast to manufacturing, the service sector continued to see productivity increases in 2002.

Revenue

Revenue is the amount of money earned from the sale of goods or services by producers in an industry. It is a measure of the monetary value of an industry's goods or services, and in the manufacturing sector is measured through the value of shipments.

Revenue includes the cost of the inputs necessary to make the good or service, while GDP is the amount remaining after all costs (except labour costs) have been paid.

Manufacturing revenue falls for the second year in a row

After falling marginally in 2001 (-0.1%), the first time in at least a decade that high technology revenues experienced a decline, revenues dropped again in 2002. The high technology sector earned $6.0 billion during 2002, a 1.4% decline from the previous year. The drop in both years was due to slumping manufacturing industries. In 2002, high tech manufacturing revenues in BC fell 11.9% while revenues for services were up 4.5%. Manufacturers of computers and other electronics were the hardest hit, experiencing declines exceeding 20% in both 2001 and 2002.

Wages and salaries

Wages and salaries are based on the earnings of all workers in an industry who are on the payroll, from working owners and senior executives to junior support staff. While overtime and bonus pay is included, other benefits such as medical plans, stock options, and time off in lieu of overtime are not.

Like the employment values reported earlier in this report, the wages and salaries data are calculated using source data from Statistics Canada's Survey of Employment, Payroll and Hours.

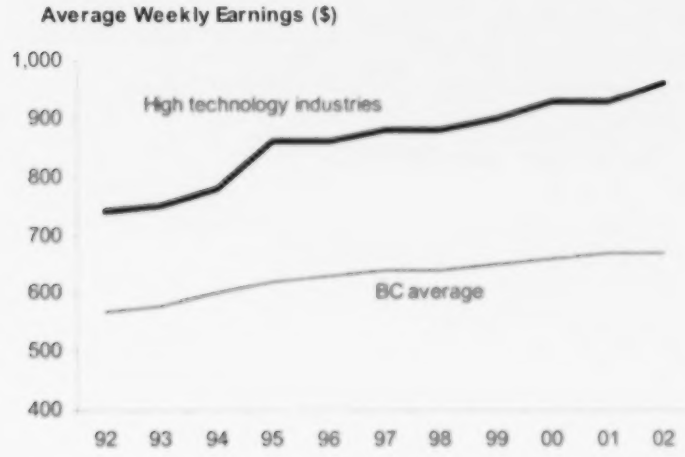
High tech wages and salaries remained fairly flat in 2002

Workers in the BC high technology sector earned a total of $2.3 billion in 2002, virtually unchanged (+0.4%) from 2001. This increase was far less than the rate of growth of wages and salaries in the province as a whole (+2.1%). Shrinking high tech employment and rising pay scales combined to maintain total earnings in the sector at the same level as the previous year.

High tech service workers earn more, on average, than other service workers but high tech manufacturing workers earn less than their counterparts.

Average weekly earnings recorded a substantial increase (+3.0%) to $960. This is significantly higher than the BC industrial aggregate ($670), which climbed 1.0% in 2002. The level of earnings remained substantially higher in the high technology services sector ($1,050) compared to the service sector overall ($640). The opposite was true for workers in high technology manufacturing who earned an average of $760 per week, while the average manufacturing worker in BC made $840. The wage disparity in high tech services sector is likely due to a combination of greater skill requirements relative to many jobs, plus the demand for skilled high technology workers, which necessitates greater pay to both attract and retain them.

High tech industries have higher wages



Establishments: how many high tech businesses are there?

The high tech sector is a dynamic one, with activities in a wide range of industries. Statistics Canada's Business Register is used to count how many establishments are in each industry in the sector, how many employees they have, and where they are located.

An establishment is the smallest accounting unit within a firm that can report certain financial data. A single company may contain a number of establishments. A branch location does not always signify the existence of an establishment; for example, bank branches are not identified as individual establishments. Furthermore, to be included in the tabulations the establishment must have paid employees; owner-operator firms with no paid employees are not included.

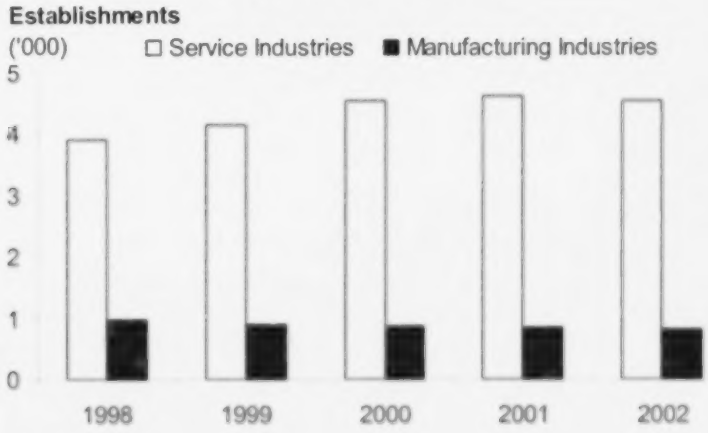
The number of high tech establishments fell in 2002

In BC, there were 2.1% less high technology establishments in 2002 than in 2001, the first decline in at least five years. Excluding those establishments with no employees, there were 5,339 high tech establishments, of which more than eight out of every ten were in service industries. There were 4,525 high technology service establishments, versus only 814 in the manufacturing industries. The number of high tech manufacturing establishments has been shrinking each year since 1998.

The service sector dominates in terms of the number of high technology establishments, and its share is getting larger. While the service sector lost 97 establishments in 2002 (-2.1%), it still outnumbered the manufacturing sector by over 4[illegible]%. The computer and engineering services industry, which made up the bulk of the high tech service sector, lost 88 establishments in 2002.

Service industries dominate the count of high tech establishments.

Over four-fifths of high tech establishments are in service industries



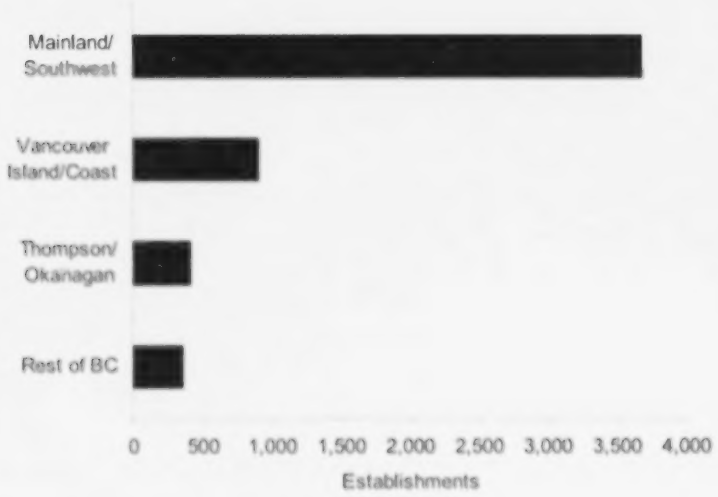
Although the number of establishments with 1 to 4 employees (+0.3%) and with 20 to 49 employees (+2.4%) crept up, there were substantially fewer establishments with 10 to 19 employees (-12.8%), with 50 or more employees (-11.0%) and with 5 to 9 employees (-6.9%). Combining effects from both sides, the total number of high tech establishments was down 2.1%.

Although establishments in the service sector heavily outnumber those in manufacturing industries, they tend to have more employees. One in ten of the manufacturing establishments employed over 50 workers, while only one in 25 of the service establishments were this large. At the other end of the size scale, just over half of the high technology manufacturing establishments had between 1 and 4 workers, but two-thirds of the high technology service establishments were this size.

High tech establishments are located where the people are

As one would expect, high technology establishments tend to be located in the most populous areas of the province. In 2002, over two thirds of high technology establishments (3,675) were located in the Mainland/Southwest Development Region (which includes Greater Vancouver). Most of the remainder were found in Vancouver Island/Coast (902) and Thompson/Okanagan (408).

Two-thirds of high tech establishments are in the Mainland/Southwest



The location of high tech establishments mirrors the distribution of BC's population.

Given the prominent role of the Lower Mainland, most of the decline in high technology establishments can be attributed to this regional district. There was a net decline of 119 establishments in Greater Vancouver in 2002. Declines occurred in both the service sector and the manufacturing industries, and unsurprisingly the larger service sector was the major contributor. The Capital region (which includes Greater Victoria) recorded the largest growth, adding 27 establishments in 2002. The Thompson/Okanagan region lost seven high tech establishments in 2002.

Self-employment

It is widely recognised that self-employment is an increasingly important factor in the BC economy. There are no particularly good measures of self-employment in the high tech sector at this point, but it is possible to arrive at a rough approximation through a tabulation of the number of establishments with no employee payroll. This approximates the number of self-employed with no employees (those with employees will be counted in the number of establishments discussed earlier). 1998 was the first full year that the number of establishments with no payroll was measured, limiting the scope of the historical data.

Note: *Care must be used in interpreting these data. It would be erroneous to add these establishment counts to the total number of high technology workers reported elsewhere in this report due to the differences in what they are measuring.*

Self-employment in the high tech sector

Some of the high technology industries, particularly computer and engineering services, are ideally suited to self-employment, where the skills, knowledge, and energy of the individual are more important than large capital investment. The data confirms this, as more than half of the businesses (6,072 of 12,041) that were deemed high technology had no paid employees. (Note that these figures *cannot* be added to the employment estimates presented earlier to arrive at a "total" employment figure for the sector.) Over nine out of every ten of the zero employee high technology establishments were in the high technology service industries. About 59% of all workers in the computer and engineering services were self-employed in 2002. By comparison, only 35% of workers in manufacturing industries were self-employed.

Compared to the rest of the economy, the high technology industry has a larger proportion of businesses without employees. The total proportion of businesses with no employees for all industries was just over 50%, compared to 56% in the high technology sector.

Establishments, 2002

	Zero employees	1+ employees
High technology manufacturing	436	814
High technology services	6,266	4,525
Computer & engineering services	*6,116*	*4,279*
Information services	*150*	*246*
High technology sector: total	6,702	5,339

4 Profile and Trends II International Trade in High Technology Goods and Services

Trade in High Technology Goods

International trade is an important aspect of the high technology sector, as reflected in the high volume of two-way trade.

The domestic market for high technology goods does not have sufficient volume to achieve the economies of scale needed to remain competitive. Therefore, access to international markets is extremely important as it allows BC producers of high technology goods to focus on market niches.

At the same time, BC manufacturers do not produce enough of some types of high technology equipment to satisfy the domestic demand and as a result, large volumes of goods are imported into the province. It is interesting to note that a major consumer of high technology imports is the high technology sector itself.

High technology goods referred to in this section are based on a list developed by the U.S. Bureau of the Census and modified to fit Canadian conditions. ***Starting with this edition, the definition of high technology commodities has been revised.*** For more information, please see Appendix B "Defining High Technology Commodities."

Exports of high technology goods fall

Exports of high tech commodities declined for the second straight year in 2002.

The continued weakness in British Columbia's high technology goods sector is reflected in high tech exports, which experienced a significant decline for the second year in a row. In 2002, high technology exports from British Columbia were valued at $684.6 million, a drop of 8.5% from 2001. However, the drop in the value of international shipments of goods in the high technology sector was marginally less severe than for overall exports, which fell 8.6%. High technology goods comprised approximately 2.4% of all BC commodity exports in 2002.

The decline in high tech exports was spread across several commodity groups, but there were some positive signs for some commodity exports.[1] International shipments of goods classified in the life sciences category almost doubled in 2002 (+96%). The increase was concentrated in certain types of medical equipment, particularly specific varieties of electro-diagnostic apparatus, mechano-therapy appliances and psychological aptitude-testing apparatus.

Computers and telecommunications exports halted a three-year decline, edging up 0.9%. Exports of goods in this commodity group have dropped over 40% since peaking at $443.2 million in 1998. However, with exports of $262.3 million in 2002, this group still ranks first in value of BC high technology exports, although its share has slipped from a high of just under 71% in 1992 to just over 38% in 2002.

The commodity group with the most significant decline was material design, which plummeted for the second straight year, dropping to its lowest level since 1996. In 2000, exports in this group were valued at $178.6 million, but by 2002, only $3.2 million worth

[1] For information on high technology commodity groups, see Appendix B.

of these goods were shipped. The erratic growth patterns exhibited by this commodity group are due to one-time sales of optical fibres and optical fibre bundles and cables.

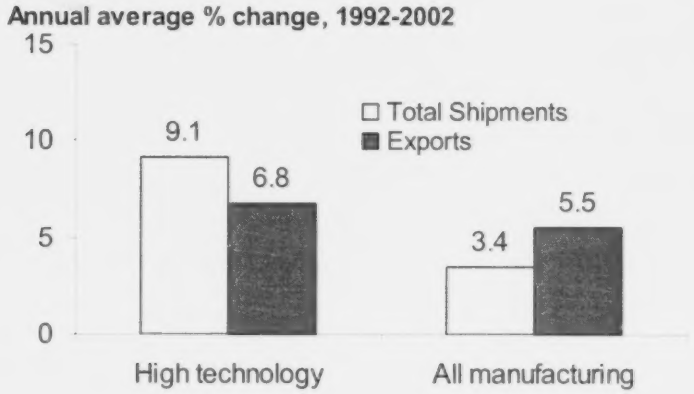
BC high technology exports by commodity group—2002

	$ million	% change
Computers and Telecommunications	262.3	0.9
Life Sciences	186.2	96.3
Aerospace	104.5	-12.1
Opto-Electronics	70.9	-41.5
Computer Integrated Manufacturing	47.5	-15.7
Electronics	4.6	-74.7
Weapons and Nuclear	3.9	-40.2
Material Design	3.2	-95.5
Biotechnology	1.7	5.7
Total	**684.6**	**-8.5**

Despite two consecutive years of large declines, exports of high technology commodities in 2002 were almost double the value recorded in 1992.

Although the momentum of high technology exports has slipped in the last couple of years, over the last decade international shipments of high technology commodities have grown at an annual average rate[2] of 6.8%. This exceeds the average growth rate of 5.5% for total manufactured commodities. Even with the significant drops in 2001 and 2002, the value of high technology exports from BC expanded 93% from 1992 to 2002.

High technology goods exports have grown faster than total manufactured goods exports

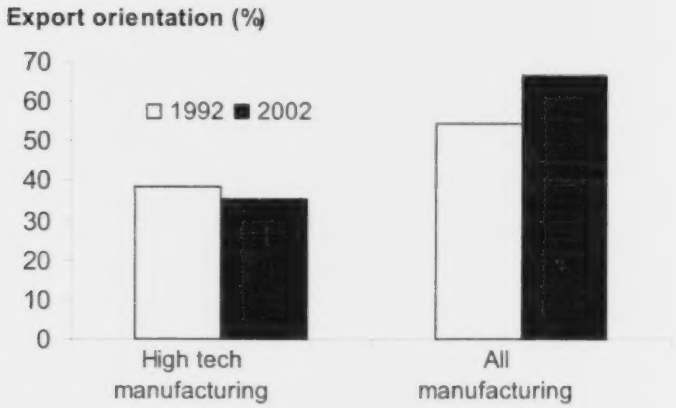


Despite the greater rate of growth in exports of high technology goods compared to all manufactured commodities, a relatively smaller portion of their total shipments[3] are exported. Approximately 66% of all processed goods manufactured in BC were ex-

[2] Compound rate.
[3] A term used interchangeably with "revenue" elsewhere in this report.

ported in 2002, compared to only 35% of high technology goods. This gap has widened over the last decade, as a greater percentage of total manufactured goods was shipped abroad in 2002 compared to 1992, but the opposite was true for high technology goods. In 1992, high tech exports were about 39% of total high tech shipments, while for all manufactured goods, exports were 54% of the total. Thus the gap has more than doubled from 15 percentage points to 31.

A smaller portion of high technology products are exported compared to total manufacturing



Manufacturers of high tech commodities export less of their outputs compared to other BC manufacturers.

The US is the destination of most BC high tech exports

As with exports in general, the United States is the top destination for high technology goods exported from BC. In 2002, BC manufacturers of high technology commodities exported $558.1 million of their products to the United States, accounting for 82% of the total value of high technology exports. By comparison, 68% of BC's total goods exports were shipped to the United States.

The United States imports an even larger percentage of high technology goods exported from BC than total goods exports.

After slipping to fifth place in 2001, Japan rebounded to reclaim second rank in 2002. However, BC high tech exports to Japan ($22 million) are still only a fraction of those to the United States. In 2002, BC origin exports of high technology commodities to the United States were over 25 times greater than those to Japan.

Rounding out the top five destinations for BC high tech exports in 2002 were the United Kingdom at $21.9 million, Cyprus at $9.6 million and Germany at $7.3 million. Italy, which was ranked second in 2001, slipped out of the top ten in 2002 with a 91% drop in the value of high tech shipments to that country due to shipments of optical devices, appliances and instruments falling to only one per cent of their value in 2001. The significant drop in shipments to Italy was the main reason why exports to the European Union sank 43% in 2002, wiping out a similar gain a year earlier. However, the improving economy of some Asian countries helped boost high tech exports to the Pacific Rim by 42% after four con-

secutive years of double-digit declines. Japan (+127%) and Taiwan (+94%) led the way.

BC high technology exports by destination—2002

	$ million	% change
USA	558.1	-6.4
European Union	48.1	-43.3
Pacific Rim	47.2	41.5
Rest of the world	31.2	-6.9
Total	**684.6**	**-8.5**

Mode of transport

With most of BC's high tech exports shipped to the United States, it should come as no surprise that the most frequent mode of transport is by land

Most BC high technology exports are transported by either land (58%) or air (39%), with only a minor percentage (3%) shipped by sea. The destination of the exports is a significant determinant of the mode of transport. Since the United States is the destination for the bulk of high tech exports and air transport is more expensive, on average, land (i.e., rail or truck) is the most popular mode of transport. Over two-thirds of exports to the US travel by land, and the remainder are shipped by air.

BC high technology exports by destination and mode of transport—2002

Region	Mode of transport	$ millions	% of region	% of total high tech exports
United States	Land	384.2	68.8	56.1
	Sea	0.0	0.0	0.0
	Air	173.9	31.2	25.4
	Total	*558.1*	*100.0*	*81.5*
All other countries	Land	9.6	7.6	1.4
	Sea	20.9	16.5	3.0
	Air	96.0	75.9	14.0
	Total	*126.5*	*100.0*	*18.5*
Total	Land	393.8	57.5	57.5
	Sea	20.9	3.0	3.0
	Air	269.9	39.4	39.4
	Total	*684.6*	*100.0*	*100.0*

For all other countries excluding the US, air cargo is the most frequent mode of transport, accounting for over three-quarters of the total. Approximately 17% are shipped by sea, and 8% by land. [4]

High technology imports also fell in 2002

In 2002, the high technology slump affected imports of high technology commodities as well as exports. There were $4.1 billion dollars worth of high tech goods imported into BC in 2002, a drop

[4] The seemingly implausible shipments of products by land to overseas destinations is explained by the fact that the goods may leave BC by either truck or rail to points of departure in the United States where they are loaded onto ships or planes for the remainder of their journey.

of 8.8% from a year earlier. Some of this drop may be due to the fact that a significant portion of imports are used as inputs in the production of high technology products slated for export. As the demand for high tech goods exported from BC slumped, the demand for those input commodities also fell.

The value of high tech goods imported into BC was almost six times that of high tech exports. Similar to exports, computer and telecommunication goods lead the way as the most important import. Almost three times the value of this commodity group was imported into the province compared to second-ranked aerospace goods. These two groups together comprise about 72% of all high technology imports into British Columbia.

BC high technology imports by commodity group—2002

	$ million	% change
Computers and Telecommunications	2,175.0	-7.0
Aerospace	766.4	-8.2
Life Sciences	540.6	6.7
Electronics	227.8	-31.7
Computer Integrated Manufacturing	162.6	-2.1
Opto-Electronics	104.9	-15.0
Biotechnology	52.1	-9.5
Material Design	29.8	-64.1
Weapons and Nuclear	28.5	-17.6
Total	**4,087.7**	**-8.8**

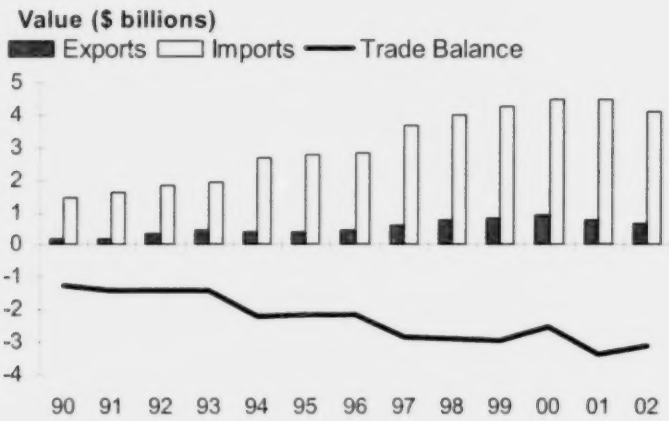
As with exports, the United States is the dominant source of high tech imports into BC; however, the distribution of imports is much more diverse than that of exports. In 2002, almost half (47%) of all high tech imports into BC originated in the United States. France was the next most significant origin of BC high tech imports (8%). Most of the goods imported from France were aircraft and aircraft parts.

The balance of trade

BC has a trade deficit in high technology goods as imports far exceed exports.

BC's imports of high technology commodities are far greater than the value of exports, and as a result, the province runs a trade deficit in these goods. After hitting a peak of $3.3 billion in 2001, BC's high technology trade deficit fell to $3.1 billion in 2002, as the absolute decline in imports was much larger than that of exports. However, this is still the second largest deficit recorded and only the second time it has exceeded $3 billion.

The high technology trade deficit improved in 2002 after peaking in 2001



Unlike total commodity trade where BC has a substantial trade surplus with the US, BC is in a deficit position with the US in trade in high tech goods

Over a third ($1.1 billion) of BC's high tech trade deficit is with the United States. This is in stark contrast to commodity trade as a whole, where BC has a substantial $8.9 billion trade surplus with the US. British Columbia also has large high tech trade deficits with the countries of the Pacific Rim ($838 million) and the European Union ($667 million).

The trade deficit spans across all commodity groups. The largest deficits are for goods with the highest volumes of trade. The trade deficit for computers and telecommunications alone is over two and a half times the value of all BC high tech commodity exports combined.

BC balance of trade in high technology goods by commodity group—2002

	$ millions
Weapons and Nuclear	-23.7
Material Design	-25.0
Opto-Electronics	-30.6
Electronics	-37.9
Biotechnology	-50.4
Computer Integrated Manufacturing	-110.4
Life Sciences	-350.3
Aerospace	-614.4
Computers and Telecommunications	-1,834.0
Total	**-3,078.6**

Export of high technology services

Service exports are generally more difficult to measure compared to exports of goods. Some service exports take place when BC-based professionals, such as engineers or software programmers, work for a period of time outside the province. Service exports also occur when, for example, an engineering firm produces a study in its BC office for an overseas client or when a software developer creates a new program that is "shipped" on-line to a client in another country.

Why are they important?

Over the last couple of decades, worldwide trade in services has increased significantly as technical innovations have widened the scope of the service sector and advances in transportation and communications have decreased the distance between countries in an economic sense. The proliferation of e-mail, the Internet, and other forms of information technology has made it easier to conduct business with clients from around the world. Moreover, decreases in the cost of travel, and an increased number of overseas offices have made it more economical—and practical—for companies to send employees overseas to conduct business.

The analysis presented here is for 2001, the most recent year for which data are available.

Service exports continue to grow

BC's high tech service industries continue to increase their share of high tech exports.

Although there are four broad groups of service industries in the high technology sector, only two of them derive a significant part of their revenues from exports. In 2001, exports of computer and engineering services amounted to almost $1.1 billion, almost one and a half times the value of all high technology goods exports. This is the third consecutive year that high tech service exports have exceeded exports of high tech goods. The importance of high tech service exports has been growing. In 1991, services exports were less than half the value of goods exports.

BC high technology service exports—2001

	Revenues	Exports	
	$ million	$ million	% change
Computer services	2,451	956	5.5
Engineering services	1,439	137	33.1
Total	**3,890**	**1,093**	**8.3**

Exports of computer services continued to expand in 2001, such that, for the first time, the value of these exports exceeded the total value of international shipments of high technology commodities. Engineering services, which experienced significant declines in the three previous years, rebounded somewhat in 2001. The overall increase in high tech service exports was 8.3%, which seems to fly in the face of expectations given the general weakness in the high technology sector in that year. It appears that the high technology service sector in British Columbia may have escaped most of the problems associated with the bursting of the dotcom bubble.

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Detailed Table 1. Gross Domestic Product (GDP) (Constant Dollar) at Basic Prices[1] by Industry, 1992-2002[2]

Constant dollars (1997 $ million)

NAICS	INDUSTRY	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Manufacturing		**470**	**444**	**479**	**495**	**645**	**743**	**825**	**1,152**	**1,511**	**1,171**	**988**
325	Chemicals	79	124	118	104	*	*	*	*	129	128	141
	Computer & other Electronics	280	234	261	279	*	*	568	*	1,198	868	661
33641	Aerospace	57	42	51	58	*	*	*	69	80	65	65
33911	Medical equipment	58	58	60	62	61	68	73	95	104	111	121
Services		**1,008**	**1,198**	**1,340**	**1,451**	**1,498**	**1,572**	**1,827**	**1,799**	**2,004**	**2,334**	**2,446**
51	Information services	133	212	140	153	171	175	358	382	480	556	624
541510	Computer systems design	117	205	397	463	540	529	600	636	754	806	823
541330	Engineering services	803	807	817	843	777	869	869	781	770	972	998
High Technology Sector Total		**1,479**	**1,650**	**1,829**	**1,959**	**2,147**	**2,316**	**2,653**	**2,951**	**3,514**	**3,505**	**3,434**
BC Industrial Aggregate		**87,833**	**92,110**	**96,548**	**99,129**	**101,306**	**104,554**	**106,151**	**108,851**	**113,550**	**114,539**	**116,888**
High Technology as a % of Total		**1.7**	**1.8**	**1.9**	**2.0**	**2.1**	**2.2**	**2.5**	**2.7**	**3.1**	**3.1**	**2.9**

1. Industry-based GDP data are now reported at basic prices. Previously a "factor cost" method of calculation was used. The difference between the basic price and factor cost concept is that the factor cost estimate includes all subsidies and excludes all indirect taxes.
2. Prior to the base year (1997), components do not sum to published total due to the inclusion of an adjusting entry.

* Data has been suppressed due to confidentiality.

Source: BC STATS and Statistics Canada

Detailed Table 1 (ctd). Gross Domestic Product (GDP) (Constant Dollar) at Basic Prices[1] by Industry, 1992-2002

% change from previous year

NAICS	INDUSTRY	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Manufacturing		**41.1**	**-5.5**	**7.9**	**3.3**	**30.3**	**15.2**	**11.0**	**39.6**	**31.2**	**-22.5**	**-15.6**
325	Chemicals	-2.5	57.0	-4.8	-11.9	*	*	*	*	*	-0.8	10.2
	Computer & other Electronics	59.1	-16.4	11.5	6.9	*	*	*	*	*	-27.5	-23.8
33641	Aerospace	0.0	-26.3	21.4	13.7	*	*	*	*	15.9	-18.8	0.0
33911	Medical equipment	114.8	0.0	3.4	3.3	-1.6	11.5	7.4	30.1	9.5	6.7	9.0
Services		**-3.9**	**18.8**	**11.9**	**8.3**	**3.2**	**4.9**	**16.2**	**-1.5**	**11.4**	**16.5**	**4.8**
51	Information services	7.3	59.4	-34.0	9.3	11.8	2.3	104.6	6.7	25.7	15.8	12.2
541510	Computer systems design	6.4	75.2	93.7	16.6	16.6	-2.0	13.4	6.0	18.6	6.9	2.1
541330	Engineering services	-7.4	0.5	1.2	3.2	-7.8	11.8	0.0	-10.1	-1.4	26.2	2.7
High Technology Sector Total		**6.3**	**11.6**	**10.8**	**7.1**	**9.6**	**7.9**	**14.6**	**11.2**	**19.1**	**-0.3**	**-2.0**
BC Industrial Aggregate		**3.2**	**4.9**	**4.8**	**2.7**	**2.2**	**3.2**	**1.5**	**2.5**	**4.3**	**0.9**	**2.1**

1. Industry-based GDP data are now reported at basic prices. Previously a "factor cost" method of calculation was used. The difference between the basic price and factor cost concept is that the factor cost estimate includes all subsidies and excludes all indirect taxes.

* Data has been suppressed due to confidentiality.

Source: BC STATS and Statistics Canada

Detailed Table 2. Gross Domestic Product (GDP) (Current Dollar) at Basic Prices[1] by Industry, 1992-2002

Current dollars ($ million)

NAICS	INDUSTRY	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Manufacturing		**438**	**462**	**491**	**637**	**771**	**743**	**742**	**914**	**1,142**	**918**	**850**
325	Chemicals	60	118	117	128	*	*	*	*	131	134	144
	Computer & other Electronics	276	257	264	381	*	*	498	*	828	601	508
33641	Aerospace	52	34	53	68	*	*	*	66	79	69	71
33911	Medical equipment	50	52	56	60	60	68	73	93	104	114	127
Services		**1,036**	**1,214**	**1,315**	**1,445**	**1,430**	**1,572**	**1,856**	**1,811**	**2,055**	**2,364**	**2,494**
51	Information services	152	228	138	156	179	175	357	372	484	557	639
541510	Computer systems design	134	220	389	470	567	529	596	619	760	785	812
541330	Engineering services	750	767	788	820	684	869	902	820	811	1,022	1,042
High Technology Sector Total		**1,475**	**1,676**	**1,806**	**2,082**	**2,200**	**2,316**	**2,597**	**2,725**	**3,197**	**3,282**	**3,343**
BC Industrial Aggregate		**81,515**	**87,719**	**94,773**	**99,065**	**101,865**	**104,554**	**105,909**	**110,442**	**118,397**	**120,085**	**122,800**
High Technology as a % of Total		**1.8**	**1.9**	**1.9**	**2.1**	**2.2**	**2.2**	**2.5**	**2.5**	**2.7**	**2.7**	**2.7**

1. Industry-based GDP data are now reported at basic prices. Previously a "factor cost" method of calculation was used. The difference between the basic price and factor cost concept is that the factor cost estimate includes all subsidies and excludes all indirect taxes.

* Data has been suppressed due to confidentiality.

Source: BC STATS and Statistics Canada

Detailed Table 2 (ctd). Gross Domestic Product (GDP) (Current Dollar) at Basic Prices[1] by Industry, 1992-2002

% change from previous year

NAICS	INDUSTRY	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Manufacturing		**40.8**	**5.5**	**6.3**	**29.7**	**21.0**	**-3.6**	**-0.1**	**23.2**	**24.9**	**-19.6**	**-7.4**
325	Chemicals	-6.3	96.7	-0.8	9.4	*	*	*	*	*	2.3	7.5
	Computer & other Electronics	53.3	-6.9	2.7	44.3	*	*	*	*	*	-27.4	-15.5
33641	Aerospace	20.9	-34.6	55.9	28.3	*	*	*	*	19.7	-12.7	2.9
33911	Medical equipment	117.4	4.0	7.7	7.1	0.0	13.3	7.4	27.4	11.8	9.6	11.4
Services		**-1.2**	**17.2**	**8.3**	**9.9**	**-1.0**	**9.9**	**18.1**	**-2.4**	**13.5**	**15.0**	**5.5**
51	Information services	7.8	50.0	-39.5	13.0	14.7	-2.2	104.0	4.2	30.1	15.1	14.7
541510	Computer systems design	7.2	64.2	76.8	20.8	20.6	-6.7	12.7	3.9	22.8	3.3	3.4
541330	Engineering services	-4.1	2.3	2.7	4.1	-16.6	27.0	3.8	-9.1	-1.1	26.0	2.0
High Technology Sector Total		**8.5**	**13.6**	**7.8**	**15.3**	**5.7**	**5.3**	**12.1**	**4.9**	**17.3**	**2.7**	**1.9**
BC Industrial Aggregate		**5.3**	**7.6**	**8.0**	**4.5**	**2.8**	**2.6**	**1.3**	**4.3**	**7.2**	**1.4**	**2.3**

1. Industry-based GDP data are now reported at basic prices. Previously a "factor cost" method of calculation was used. The difference between the basic price and factor cost concept is that the factor cost estimate includes all subsidies and excludes all indirect taxes.

* Data has been suppressed due to confidentiality.

Source: BC STATS and Statistics Canada

Detailed Table 3. Gross Domestic Product (GDP) (Constant Dollar) at Basic Prices,[1] Selected Activities, 1992-2002

Constant (1997 $ million)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Goods-producing industries	**25,027**	**25,963**	**26,580**	**26,885**	**26,892**	**27,806**	**27,329**	**28,557**	**29,779**	**28,322**	**28,129**
Agriculture and related	*	1,881	1,727	1,842	1,987	*	2,085	2,356	2,420	2,483	2,541
Fishing, trapping and related	403	523	458	340	311	*	273	281	289	276	280
Forestry and related	*	*	*	*	*	*	8,694	9,246	9,458	8,597	8,716
Mining and related	*	3,617	3,789	4,099	*	4,415	*	4,443	4,886	5,018	4,883
Other manufacturing	2,391	*	*	*	3,131	3,172	*	3,806	4,203	3,582	3,399
Total manufacturing	10,514	10,687	10,718	10,839	10,847	11,479	11,323	12,772	13,431	12,058	12,249
Construction	5,882	5,961	6,374	6,240	6,176	6,433	5,896	5,826	5,878	5,905	5,804
Utilities	2,450	2,306	2,314	2,376	2,615	2,468	2,526	2,599	2,645	2,461	2,507
Service-producing industries	**62,972**	**66,294**	**70,058**	**72,282**	**74,342**	**76,748**	**78,822**	**80,294**	**83,770**	**86,217**	**88,758**
Wholesale trade	4,190	4,405	4,731	4,469	4,789	4,932	5,331	5,386	5,575	5,388	5,824
Retail trade	4,699	5,012	5,174	5,483	5,758	6,050	6,403	6,479	6,817	7,179	7,594
Transportation and warehousing	*	*	*	*	*	6,590	6,607	6,696	6,898	6,754	6,763
Information and cultural services	*	*	*	*	*	3,618	3,817	4,155	4,685	5,182	5,446
Finance, insurance, real estate and leasing	19,347	20,393	21,853	22,461	22,950	23,606	23,912	24,466	25,396	26,214	27,144
Professional, scientific and technical services	2,967	3,202	3,342	3,507	3,524	4,012	4,483	4,437	4,801	5,055	5,009
Administration and support, and waste management	1,441	1,671	1,815	2,003	2,026	2,012	2,046	2,094	2,327	2,484	2,549
Education	4,075	4,252	4,373	4,749	5,191	5,406	5,608	5,709	5,868	5,969	6,120
Health care and social assistance	6,652	6,656	7,013	7,180	7,288	7,224	7,258	7,359	7,503	7,666	7,898
Arts, entertainment and recreation	901	924	1,011	1,045	1,069	1,128	1,120	1,212	1,265	1,302	1,329
Accommodation and food services	2,948	3,152	3,340	3,503	3,528	3,594	3,609	3,616	3,781	3,900	3,832
Other services	2,003	2,149	2,223	2,352	2,463	2,812	2,779	2,771	2,885	2,970	3,056
Public administration	5,519	5,685	5,769	5,803	5,774	5,764	5,849	5,915	5,968	6,154	6,195
GDP at basic prices	**87,833**	**92,110**	**96,548**	**99,129**	**101,306**	**104,554**	**106,151**	**108,851**	**113,550**	**114,539**	**116,888**

1. Industry-based GDP data are now reported at basic prices. Previously a "factor cost" method of calculation was used. The difference between the basic price and factor cost concept is that the factor cost estimate includes all subsidies and excludes all indirect taxes.
2. Data for the period prior to 1997 does not sum to the published total due to the inclusion of an adjusting entry.
3. Totals are based on unrounded data.

* Data has been suppressed by Statistics Canada for reasons of confidentiality.

Source: BC STATS and Statistics Canada

Detailed Table 3 (ctd). Gross Domestic Product (GDP) (Constant Dollar) at Basic Prices,[1] Selected Activities, 1992-2002

% change from previous year

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Goods-producing industries	**3.7**	**2.4**	**1.1**	**0.0**	**3.4**	**-1.7**	**4.5**	**4.3**	**-4.9**	**-0.7**
Agriculture and related	*	-8.2	6.7	7.9	*	*	13.0	2.7	2.6	2.3
Fishing, trapping and related	29.8	-12.6	-25.6	-8.7	*	*	2.8	2.9	-4.5	1.7
Forestry and related	*	*	*	*	*	*	6.4	2.3	-9.1	1.4
Mining and related	*	4.8	8.2	*	*	*	*	10.0	2.7	-2.7
Other manufacturing	*	*	*	*	1.3	*	*	10.4	-14.8	-5.1
Total manufacturing	1.6	0.3	1.1	0.1	5.8	-1.4	12.8	5.2	-10.2	1.6
Construction	1.3	6.9	-2.1	-1.0	4.2	-8.4	-1.2	0.9	0.5	-1.7
Utilities	-5.9	0.4	2.7	10.1	-5.6	2.3	2.9	1.8	-7.0	1.9
Service-producing industries	**5.3**	**5.7**	**3.2**	**2.8**	**3.2**	**2.7**	**1.9**	**4.3**	**2.9**	**2.9**
Wholesale trade	5.1	7.4	-5.5	7.2	3.0	8.1	1.0	3.5	-3.3	8.1
Retail trade	6.7	3.2	6.0	5.0	5.1	5.9	1.2	5.2	5.3	5.8
Transportation and warehousing	*	*	*	*	*	0.3	1.3	3.0	-2.1	0.1
Information and cultural services	*	*	*	*	*	5.5	8.9	12.8	10.6	5.1
Finance, insurance, real estate and leasing	5.4	7.2	2.8	2.2	2.9	1.3	2.3	3.8	3.2	3.5
Professional, scientific and technical services	7.9	4.4	4.9	0.5	13.9	11.7	-1.0	8.2	5.3	-0.9
Administration and support, and waste management	15.9	8.6	10.4	1.2	-0.7	1.7	2.4	11.1	6.8	2.6
Education	4.3	2.8	8.6	9.3	4.1	3.7	1.8	2.8	1.7	2.5
Health care and social assistance	0.1	5.3	2.4	1.5	-0.9	0.5	1.4	2.0	2.2	3.0
Arts, entertainment and recreation	2.5	9.4	3.4	2.3	5.5	-0.7	8.2	4.4	2.9	2.1
Accommodation and food services	6.9	6.0	4.9	0.7	1.9	0.4	0.2	4.6	3.1	-1.7
Other services	7.3	3.4	5.8	4.7	14.2	-1.2	-0.3	4.1	2.9	2.9
Public administration	3.0	1.5	0.6	-0.5	-0.2	1.5	1.1	0.9	3.1	0.7
GDP at basic prices	**4.9**	**4.8**	**2.7**	**2.2**	**3.2**	**1.5**	**2.5**	**4.3**	**0.9**	**2.1**

1. Industry-based GDP data are now reported at basic prices. Previously a "factor cost" method of calculation was used. The difference between the basic price and factor cost concept is that the factor cost estimate includes all subsidies and excludes all indirect taxes.

* Data has been suppressed by Statistics Canada for reasons of confidentiality.

Source: BC STATS and Statistics Canada

Detailed Table 4. Gross Domestic Product (GDP) (Current Dollar) at Basic Prices,[1] Selected Activities, 1992-2002

Current ($ million)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Goods-producing industries	**21,529**	**23,806**	**26,636**	**27,984**	**27,595**	**27,806**	**26,623**	**29,192**	**32,179**	**30,568**	**29,731**
Agriculture and related	*	1,913	1,813	1,795	1,966	*	2,313	2,618	2,711	2,983	2,897
Fishing, trapping and related	493	592	805	735	588	*	305	339	365	329	331
Forestry and related	*	*	*	*	*	*	8,272	9,511	9,695	8,333	8,167
Mining and related	*	3,313	3,986	4,309	*	4,415	*	3,909	5,927	6,299	5,590
Other manufacturing	2,201	*	*	*	3,262	3,172	*	3,850	4,127	3,575	3,527
Total manufacturing	8,035	9,273	10,962	11,857	11,440	11,479	10,890	13,139	13,574	12,098	12,262
Construction	6,145	6,384	6,722	6,522	6,229	6,433	5,996	6,003	6,042	6,150	6,116
Utilities	2,302	2,050	2,102	2,252	2,522	2,468	2,655	2,963	3,312	2,898	3,105
Service-producing industries	**59,986**	**63,913**	**68,137**	**71,081**	**74,269**	**76,748**	**79,286**	**81,249**	**86,218**	**89,517**	**93,069**
Wholesale trade	4,070	4,359	4,712	4,686	5,046	4,932	4,986	5,166	5,374	5,285	5,696
Retail trade	5,078	5,422	5,523	5,778	6,222	6,050	6,353	6,527	6,902	7,307	7,709
Transportation and warehousing	*	*	*	*	*	6,590	6,811	6,864	7,313	7,400	7,446
Information and cultural services	*	*	*	*	*	3,618	3,830	3,873	4,071	4,313	4,575
Finance, insurance, real estate and leasing	18,497	19,745	21,078	21,852	23,075	23,606	24,080	24,554	25,454	26,252	27,398
Professional, scientific and technical services	2,793	3,024	3,213	3,398	3,412	4,012	4,590	4,632	5,173	5,402	5,335
Administration and support, and waste management	1,487	1,790	1,935	2,188	2,349	2,012	2,095	2,185	2,463	2,680	2,764
Education	4,459	4,663	4,978	5,194	5,338	5,406	5,762	5,924	6,196	6,484	6,738
Health care and social assistance	5,777	6,066	6,489	6,737	7,126	7,224	7,451	7,752	8,437	8,933	9,551
Arts, entertainment and recreation	820	854	935	975	1,062	1,128	1,108	1,267	1,350	1,472	1,580
Accommodation and food services	2,832	3,048	3,240	3,480	3,673	3,594	3,581	3,677	3,979	4,217	4,193
Other services	1,601	1,680	1,801	1,976	2,097	2,812	2,837	2,912	3,174	3,385	3,538
Public administration	5,063	5,249	5,548	5,744	5,820	5,764	5,803	5,917	6,333	6,387	6,547
GDP at basic prices	**81,515**	**87,719**	**94,773**	**99,065**	**101,865**	**104,554**	**105,909**	**110,442**	**118,397**	**120,085**	**122,800**

1. Industry-based GDP data are now reported at basic prices. Previously a "factor cost" method of calculation was used. The difference between the basic price and factor cost concept is that the factor cost estimate includes all subsidies and excludes all indirect taxes.

2. Totals are calculated using unrounded data.

* Data has been suppressed by Statistics Canada for reasons of confidentiality.

Source: BC STATS and Statistics Canada

Detailed Table 4 (ctd). Gross Domestic Product (GDP) (Current Dollar) at Basic Prices,[1] Selected Activities, 1992-2002

% change from previous year

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Goods-producing industries	**10.6**	**11.9**	**5.1**	**-1.4**	**0.8**	**-4.3**	**9.7**	**10.2**	**-5.0**	**-2.7**
Agriculture and related	*	-5.2	-1.0	9.5	*	*	13.2	3.6	10.0	-2.9
Fishing, trapping and related	20.2	35.9	-8.6	-20.0	*	*	11.2	7.8	-9.8	0.4
Forestry and related	*	*	*	*	*	*	15.0	1.9	-14.0	-2.0
Mining and related	*	20.3	8.1	*	*	*	*	51.6	6.3	-11.3
Other manufacturing	*	*	*	*	-2.8	*	*	7.2	-13.4	-1.3
Total manufacturing	15.4	18.2	8.2	-3.5	0.3	-5.1	20.6	3.3	-10.9	1.4
Construction	3.9	5.3	-3.0	-4.5	3.3	-6.8	0.1	0.7	1.8	-0.6
Utilities	-11.0	2.5	7.1	12.0	-2.1	7.5	11.6	11.8	-12.5	7.1
Service-producing industries	**6.5**	**6.6**	**4.3**	**4.5**	**3.3**	**3.3**	**2.5**	**6.1**	**3.8**	**4.0**
Wholesale trade	7.1	8.1	-0.5	7.7	-2.2	1.1	3.6	4.0	-1.6	7.8
Retail trade	6.8	1.9	4.6	7.7	-2.8	5.0	2.7	5.7	5.9	5.5
Transportation and warehousing	*	*	*	*	*	3.4	0.8	6.5	1.2	0.6
Information and cultural services	*	*	*	*	*	5.8	1.1	5.1	5.9	6.1
Finance, insurance, real estate and leasing	6.7	6.8	3.7	5.6	2.3	2.0	2.0	3.7	3.1	4.4
Professional, scientific and technical services	8.3	6.3	5.7	0.4	17.6	14.4	0.9	11.7	4.4	-1.2
Administration and support, and waste management	20.4	8.1	13.1	7.3	-14.3	4.1	4.3	12.7	8.8	3.1
Education	4.6	6.8	4.3	2.8	1.3	6.6	2.8	4.6	4.7	3.9
Health care and social assistance	5.0	7.0	3.8	5.8	1.4	3.1	4.0	8.8	5.9	6.9
Arts, entertainment and recreation	4.2	9.4	4.3	9.0	6.2	-1.8	14.4	6.5	9.1	7.3
Accommodation and food services	7.6	6.3	7.4	5.5	-2.2	-0.4	2.7	8.2	6.0	-0.6
Other services	4.9	7.2	9.7	6.1	34.1	0.9	2.6	9.0	6.7	4.5
Public administration	3.7	5.7	3.5	1.3	-1.0	0.7	2.0	7.0	0.9	2.5
GDP at basic prices	**7.6**	**8.0**	**4.5**	**2.8**	**2.6**	**1.3**	**4.3**	**7.2**	**1.4**	**2.3**

1. Industry-based GDP data are now reported at basic prices. Previously a "factor cost" method of calculation was used. The difference between the basic price and factor cost concept is that the factor cost estimate includes all subsidies and excludes all indirect taxes.

* Data has been suppressed by Statistics Canada for reasons of confidentiality.

Source: BC STATS and Statistics Canada

Detailed Table 5. High Technology GDP (Constant Dollar) at Basic Prices,[1] by Province, 1992-2002

Constant (1997 $ million)

Province		1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Canada	Manufacturing	13,661	13,704	14,661	16,226	16,252	18,123	19,292	24,000	29,948	25,964	24,469
	Services	7,680	9,081	10,602	10,811	11,210	12,453	15,171	18,111	20,233	22,296	23,030
	Total	21,293	22,776	25,278	27,027	27,464	30,576	34,464	42,111	50,181	48,260	47,498
British Columbia	Manufacturing	470	444	479	495	645	743	825	1,152	1,511	1,171	988
	Services	1,008	1,198	1,340	1,451	1,498	1,572	1,827	1,799	2,004	2,334	2,446
	Total	1,479	1,650	1,829	1,959	2,147	2,316	2,653	2,951	3,514	3,505	3,434
Alberta	Manufacturing	403	390	428	569	769	913	997	967	1,084	875	871
	Services	724	822	925	1,019	1,431	1,804	2,283	2,458	2,598	2,845	2,918
	Total	1,130	1,210	1,349	1,592	2,204	2,716	3,280	3,425	3,682	3,720	3,788
Ontario	Manufacturing	6,626	6,623	6,624	7,613	7,751	8,885	9,627	11,334	14,005	11,698	10,887
	Services	3,422	4,099	5,285	5,122	4,884	5,670	6,890	8,899	10,223	11,357	11,643
	Total	10,052	10,722	11,905	12,733	12,635	14,555	16,517	20,233	24,228	23,055	22,530
Quebec	Manufacturing	5,370	5,596	6,338	6,797	6,461	6,736	6,966	9,401	12,075	11,139	10,684
	Services	2,033	2,370	2,414	2,538	2,552	2,556	3,160	3,760	4,144	4,442	4,668
	Total	7,402	7,996	8,753	9,330	9,025	9,292	10,126	13,161	16,219	15,581	15,352

1. Totals are calculated using unrounded data.

Source: BC STATS and Statistics Canada

Detailed Table 5 (ctd). High Technology GDP (Constant Dollar) at Basic Prices, by Province, 1992-2002

% change from previous year

Province		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Canada	Manufacturing	0.3	7.0	10.7	0.2	11.5	6.5	24.4	24.8	-13.3	-5.8
	Services	18.2	16.7	2.0	3.7	11.1	21.8	19.4	11.7	10.2	3.3
	Total	7.0	11.0	6.9	1.6	11.3	12.7	22.2	19.2	-3.8	-1.6
British Columbia	Manufacturing	-5.5	7.9	3.3	30.3	15.2	11.0	39.6	31.2	-22.5	-15.6
	Services	18.8	11.9	8.3	3.2	4.9	16.2	-1.5	11.4	16.5	4.8
	Total	11.6	10.8	7.1	9.6	7.9	14.6	11.2	19.1	-0.3	-2.0
Alberta	Manufacturing	-3.2	9.7	32.9	35.1	18.7	9.2	-3.0	12.1	-19.3	-0.5
	Services	13.5	12.5	10.2	40.4	26.1	26.6	7.7	5.7	9.5	2.6
	Total	7.1	11.5	18.0	38.4	23.2	20.8	4.4	7.5	1.0	1.8
Ontario	Manufacturing	0.0	0.0	14.9	1.8	14.6	8.4	17.7	23.6	-16.5	-6.9
	Services	19.8	28.9	-3.1	-4.6	16.1	21.5	29.2	14.9	11.1	2.5
	Total	6.7	11.0	7.0	-0.8	15.2	13.5	22.5	19.7	-4.8	-2.3
Quebec	Manufacturing	4.2	13.3	7.2	-4.9	4.3	3.4	35.0	28.4	-7.8	-4.1
	Services	16.6	1.9	5.1	0.6	0.2	23.6	19.0	10.2	7.2	5.1
	Total	8.0	9.5	6.6	-3.3	3.0	9.0	30.0	23.2	-3.9	-1.5

Source: BC STATS and Statistics Canada

Detailed Table 6. High Technology GDP (Current Dollar) at Basic Prices,[1] by Province, 1992-2002

Current ($ million)

Province		1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Canada	Manufacturing	13,245	13,803	14,520	16,129	16,403	18,123	18,184	22,840	28,845	25,869	25,116
	Services	7,799	8,972	10,093	10,485	11,270	12,453	15,273	18,306	21,094	24,043	24,983
	Total	21,044	22,775	24,613	26,613	27,673	30,576	33,457	41,146	49,939	49,912	50,099
British Columbia	Manufacturing	438	462	491	637	771	743	742	914	1,142	918	850
	Services	1,036	1,214	1,315	1,445	1,430	1,572	1,856	1,811	2,055	2,364	2,494
	Total	1,475	1,676	1,806	2,082	2,200	2,316	2,597	2,725	3,197	3,282	3,343
Alberta	Manufacturing	444	443	495	669	702	913	1,056	1,142	1,254	1,061	868
	Services	705	796	892	985	1,472	1,804	2,298	2,571	2,820	3,237	3,336
	Total	1,149	1,239	1,387	1,654	2,174	2,716	3,355	3,712	4,074	4,298	4,204
Ontario	Manufacturing	6,875	7,016	6,505	7,110	7,505	8,885	9,139	9,593	11,529	9,932	9,627
	Services	3,523	4,062	4,984	4,925	4,952	5,670	6,894	8,876	10,644	12,318	12,688
	Total	10,398	11,078	11,489	12,035	12,457	14,555	16,032	18,470	22,173	22,251	22,315
Quebec	Manufacturing	4,635	4,889	5,903	6,589	6,406	6,736	6,393	10,202	13,755	12,961	12,835
	Services	2,064	2,345	2,326	2,501	2,587	2,556	3,193	3,828	4,244	4,693	4,992
	Total	6,699	7,235	8,229	9,090	8,993	9,292	9,586	14,030	17,998	17,654	17,826

1. Totals are calculated using unrounded data.

Source: BC STATS and Statistics Canada

Detailed Table 6 (ctd). High Technology GDP (Current Dollar) at Basic Prices, by Province, 1992-2002

% change from previous year

Province		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Canada	Manufacturing	4.2	5.2	11.1	1.7	10.5	0.3	25.6	26.3	-10.3	-2.9
	Services	15.0	12.5	3.9	7.5	10.5	22.6	19.9	15.2	14.0	3.9
	Total	8.2	8.1	8.1	4.0	10.5	9.4	23.0	21.4	-0.1	0.4
British Columbia	Manufacturing	5.5	6.3	29.7	21.0	-3.6	-0.1	23.2	24.9	-19.6	-7.4
	Services	17.2	8.3	9.9	-1.0	9.9	18.1	-2.4	13.5	15.0	5.5
	Total	13.6	7.8	15.3	5.7	5.3	12.1	4.9	17.3	2.7	1.9
Alberta	Manufacturing	-0.2	11.7	35.2	4.9	30.1	15.7	8.1	9.8	-15.4	-18.2
	Services	12.9	12.1	10.4	49.4	22.6	27.4	11.9	9.7	14.8	3.1
	Total	7.8	11.9	19.3	31.4	24.9	23.5	10.6	9.8	5.5	-2.2
Ontario	Manufacturing	2.1	-7.3	9.3	5.6	18.4	2.9	5.0	20.2	-13.9	-3.1
	Services	15.3	22.7	-1.2	0.5	14.5	21.6	28.7	19.9	15.7	3.0
	Total	6.5	3.7	4.8	3.5	16.8	10.1	15.2	20.0	0.4	0.3
Quebec	Manufacturing	5.5	20.7	11.6	-2.8	5.2	-5.1	59.6	34.8	-5.8	-1.0
	Services	13.6	-0.8	7.5	3.4	-1.2	24.9	19.9	10.9	10.6	6.4
	Total	8.0	13.7	10.5	-1.1	3.3	3.2	46.4	28.3	-1.9	1.0

Source: BC STATS and Statistics Canada

Detailed Table 7. High Technology Sector Revenues,[1] 1992-2002

Value ($ million)

NAICS	INDUSTRY	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Manufacturing		**919**	**963**	**1,165**	**1,325**	**1,542**	**1,765**	**1,889**	**2,052**	**2,542**	**2,200**	**1,938**
325	Chemicals	168	225	278	281	*	*	*	*	299	311	332
	Computer & other Electronics	545	565	682	823	*	*	1,369	*	1,930	1,438	1,148
33641	Aerospace	102	77	101	113	*	*	*	138	136	258	247
33911	Medical equipment	105	96	105	108	113	132	137	154	177	192	210
Services		**1,436**	**1,862**	**2,085**	**2,394**	**2,601**	**3,016**	**3,101**	**3,326**	**3,556**	**3,890**	**4,065**
51	Information services	165	367	314	291	352	328	716	731	842	937	1,052
541510	Computer systems design	256	420	744	898	1,082	1,010	1,104	1,441	1,573	1,514	1,547
541330	Engineering services	1,014	1,074	1,027	1,205	1,167	1,678	1,281	1,154	1,142	1,439	1,466
High Technology Sector Total		**2,354**	**2,825**	**3,250**	**3,719**	**4,143**	**4,780**	**4,990**	**5,378**	**6,098**	**6,089**	**6,003**

1. Note that revenues for the service industries are collected on a company rather than establishment basis. As a result, revenues for those industries represent the entire Canadian earnings of companies headquartered in British Columbia. Totals are calculated using unrounded data.

* Data has been suppressed due to confidentiality.

Source: BC STATS and Statistics Canada

Detailed Table 7 (ctd). High Technology Sector Revenues,[1] 1992-2002

% change from previous year

NAICS	INDUSTRY	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Manufacturing		**32.4**	**4.8**	**21.0**	**13.7**	**16.4**	**14.5**	**7.0**	**8.6**	**23.9**	**-13.5**	**-11.9**
325	Chemicals	3.7	33.9	23.6	1.1	*	*	*	*	*	4.0	6.8
	Computer & other Electronics	31.6	3.7	20.7	20.7	*	*	*	*	*	-25.5	-20.2
33641	Aerospace	41.7	-24.5	31.2	11.9	*	*	*	*	-1.4	89.7	-4.3
33911	Medical equipment	128.3	-8.6	9.4	2.9	4.6	16.8	3.8	12.4	14.9	8.5	9.4
Services		**2.4**	**29.7**	**12.0**	**14.8**	**8.6**	**16.0**	**2.8**	**7.3**	**6.9**	**9.4**	**4.5**
51	Information services	6.5	122.4	-14.4	-7.3	21.0	-6.8	118.3	2.1	15.2	11.3	12.3
541510	Computer systems design	7.1	64.1	77.1	20.7	20.5	-6.7	9.3	30.5	9.2	-3.8	2.2
541330	Engineering services	0.6	5.9	-4.4	17.3	-3.2	43.8	-23.7	-9.9	-1.0	26.0	1.9
High Technology Sector Total		**12.3**	**20.0**	**15.0**	**14.4**	**11.4**	**15.4**	**4.4**	**7.8**	**13.4**	**-0.1**	**-1.4**

1. Note that revenues for the service industries are collected on a company rather than establishment basis. As a result, revenues for those industries represent the entire Canadian earnings of companies headquartered in British Columbia.

* Data has been suppressed due to confidentiality.

Source: BC STATS and Statistics Canada

Detailed Table 8. High Technology Sector Employment,[1] 1992-2002

NAICS	INDUSTRY	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Manufacturing Industries		**9,600**	**10,260**	**8,560**	**9,000**	**9,330**	**10,940**	**11,840**	**14,440**	**15,880**	**15,730**	**14,080**
325	Chemicals	780	860	840	940	810	1,030	960	900	920	930	1,050
	Computer & other Electronics	6,150	6,390	5,210	5,420	5,890	6,870	7,530	9,850	11,160	10,650	8,790
33641	Aerospace	490	750	810	870	900	1,140	1,250	1,610	1,740	1,760	1,710
33911	Medical equipment	2,190	2,260	1,700	1,770	1,740	1,910	2,090	2,080	2,060	2,380	2,530
Service Industries		**17,250**	**18,380**	**19,180**	**23,370**	**22,510**	**23,640**	**21,970**	**24,270**	**27,410**	**29,820**	**30,610**
51	Information services	2,210	2,150	2,130	2,080	2,450	2,730	2,990	3,600	4,540	5,290	5,720
541330	Engineering services	8,420	9,810	10,670	15,100	12,770	12,770	10,070	9,900	9,300	9,630	9,890
541510	Computer systems design	6,620	6,420	6,370	6,180	7,300	8,140	8,920	10,770	13,570	14,900	15,000
High Technology Sector Total		**26,850**	**28,630**	**27,740**	**32,360**	**31,850**	**34,570**	**33,810**	**38,710**	**43,280**	**45,550**	**44,690**
BC Industrial Aggregate		**1,300,270**	**1,352,580**	**1,399,060**	**1,448,410**	**1,462,760**	**1,499,680**	**1,511,200**	**1,513,930**	**1,574,300**	**1,595,370**	**1,612,740**

1. Totals are calculated using unrounded data.

Detailed Table 8 (ctd). High Technology Sector Employment, 1992-2002

% change from previous year

NAICS	INDUSTRY	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Manufacturing Industries		**6.8**	**-16.5**	**5.1**	**3.7**	**17.2**	**8.2**	**22.0**	**10.0**	**-0.9**	**-10.5**
325	Chemicals	10.5	-2.2	11.9	-13.8	26.9	-6.4	-7.1	3.0	1.1	12.6
	Computer & other Electronics	3.9	-18.5	4.2	8.5	16.7	9.7	30.8	13.3	-4.5	-17.5
33641	Aerospace	53.6	8.6	7.4	3.3	26.0	10.0	29.0	8.2	1.1	-2.8
33911	Medical equipment	3.3	-24.6	3.7	-1.7	9.8	9.8	-0.4	-1.3	15.7	6.1
Service Industries		**6.5**	**4.4**	**21.8**	**-3.6**	**5.0**	**-7.0**	**10.4**	**12.9**	**8.8**	**2.7**
51	Information services	-2.7	-0.6	-2.5	17.7	11.5	9.5	20.6	26.0	16.6	8.0
541330	Engineering services	16.5	8.8	41.5	-15.5	0.0	-21.1	-1.7	-6.1	3.5	2.7
541510	Computer systems design	-3.0	-0.8	-3.0	18.0	11.5	9.6	20.7	26.0	9.8	0.7
High Technology Sector Total		**6.6**	**-3.1**	**16.7**	**-1.6**	**8.6**	**-2.2**	**14.5**	**11.8**	**5.2**	**-1.9**
BC Industrial Aggregate		**4.0**	**3.4**	**3.5**	**1.0**	**2.5**	**0.8**	**0.2**	**4.0**	**1.3**	**1.1**

Source: BC STATS and Statistics Canada

Detailed Table 9. Employment by Industry,[1] British Columbia, 1992-2002

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Goods Producing Industries	**286.2**	**290.3**	**302.5**	**299.0**	**298.8**	**308.6**	**301.3**	**301.9**	**314.8**	**300.8**	**291.9**
Agriculture and Related	na	na	na	na	na	na	na	na	na	na	na
Fishing and Related	na	na	na	na	na	na	na	na	na	na	na
Forestry and Related	76.8	77.5	83.0	80.5	81.2	79.4	73.6	76.8	80.5	70.7	59.3
Logging and Forestry	*17.3*	*18.2*	*19.6*	*19.8*	*20.1*	*19.7*	*17.6*	*17.8*	*18.3*	*18.1*	*13.4*
Paper and Allied Products	*20.8*	*21.0*	*20.3*	*20.3*	*18.5*	*16.6*	*16.6*	*17.8*	*18.8*	*15.0*	*11.5*
Wood Manufacturing	*38.7*	*38.3*	*43.1*	*40.4*	*42.6*	*43.1*	*39.4*	*41.2*	*43.4*	*37.6*	*34.4*
Mining and Oil and Gas Extraction	12.7	10.5	12.3	13.1	11.9	12.8	13.0	10.7	10.6	10.5	10.3
Other Manufacturing	73.4	78.5	80.1	77.9	77.2	82.2	86.7	92.1	98.4	96.1	97.6
Construction	74.7	74.7	74.1	74.8	76.7	80.0	77.2	72.6	74.3	73.7	77.2
Utilities	8.0	8.8	9.0	8.3	8.6	8.6	8.4	9.1	9.4	9.2	9.3
Service Producing Industries	**1,014.1**	**1,062.2**	**1,093.1**	**1,145.8**	**1,160.7**	**1,186.0**	**1,200.7**	**1,202.0**	**1,252.9**	**1,287.2**	**1,311.9**
Transportation and Warehousing	74.3	78.9	84.9	86.7	82.0	83.6	85.1	83.2	83.2	82.4	82.9
Retail and Wholesale Trade	232.3	240.6	240.6	252.0	252.9	255.9	257.8	258.7	271.3	281.4	294.3
Finance, Insurance and Real Estate	81.2	87.3	84.3	87.1	84.6	88.3	89.1	87.4	91.1	89.9	88.4
Educational and Related	96.2	104.1	105.1	112.6	120.5	121.5	122.2	123.6	127.7	132.8	136.1
Health and Social	130.8	129.6	144.3	150.9	154.0	155.7	162.9	167.9	174.5	177.7	183.4
Accommodation, and Food	110.0	127.8	126.2	127.4	132.1	137.3	139.0	139.3	144.8	147.2	147.2
Amusement, Gambling and Recreation	18.4	19.4	22.3	22.9	23.6	23.1	20.6	18.0	19.1	19.6	20.8
Government	51.6	52.9	52.7	51.7	49.5	48.0	48.0	47.9	47.4	47.8	46.4
BC Industrial Aggregate	**1,300.3**	**1,352.6**	**1,399.1**	**1,448.4**	**1,462.8**	**1,499.7**	**1,511.2**	**1,513.9**	**1,574.3**	**1,595.4**	**1,612.7**
High Technology Sector Total	**26.9**	**28.6**	**27.7**	**32.4**	**31.9**	**34.6**	**33.8**	**38.7**	**43.3**	**45.6**	**44.7**

1. Totals are calculated using unrounded data

na: Data not available for specific industry

Source: BC STATS and Statistics Canada

Detailed Table 9 (ctd). Employment by Industry, British Columbia, 1992-2002

% change from previous year

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Goods Producing Industries	**1.5**	**4.2**	**-1.2**	**-0.1**	**3.3**	**-2.4**	**0.2**	**4.3**	**-4.4**	**-3.0**
Agriculture and Related	na	na	na	na	na	na	na	na	na	na
Fishing and Related	na	na	na	na	na	na	na	na	na	na
Forestry and Related	0.9	7.1	-2.9	0.8	-2.3	-7.2	4.3	4.8	-12.1	-16.1
Logging and Forestry	*5.2*	*7.9*	*1.2*	*1.3*	*-2.0*	*-10.6*	*0.8*	*2.9*	*-0.8*	*-26.1*
Paper and Allied Products	*0.9*	*-3.2*	*-0.1*	*-8.9*	*-10.3*	*0.1*	*7.1*	*6.0*	*-20.2*	*-23.6*
Wood Manufacturing	*-1.1*	*12.4*	*-6.1*	*5.5*	*1.0*	*-8.5*	*4.7*	*5.1*	*-13.3*	*-8.3*
Mining and Oil and Gas Extraction	-16.8	16.6	6.2	-9.2	7.7	1.8	-18.0	-0.4	-0.7	-2.2
Other Manufacturing	6.9	2.1	-2.8	-0.9	6.5	5.4	6.3	6.8	-2.3	1.5
Construction	-0.1	-0.8	0.9	2.6	4.4	-3.5	-5.9	2.3	-0.8	4.7
Utilities	9.7	2.2	-6.8	3.4	-0.6	-2.2	8.6	2.7	-1.8	1.1
Service Producing Industries	**4.7**	**2.9**	**4.8**	**1.3**	**2.2**	**1.2**	**0.1**	**4.2**	**2.7**	**1.9**
Transportation and Warehousing	6.3	7.5	2.1	-5.4	2.0	1.7	-2.2	0.0	-1.0	0.6
Retail and Wholesale Trade	3.6	0.0	4.7	0.4	1.2	0.7	0.4	4.9	3.7	4.6
Finance, Insurance and Real Estate	7.6	-3.4	3.3	-2.9	4.4	0.9	-1.9	4.2	-1.3	-1.7
Educational and Related	8.3	1.0	7.1	7.0	0.8	0.6	1.1	3.3	4.0	2.5
Health and Social	-0.9	11.3	4.6	2.0	1.1	4.7	3.0	3.9	1.9	3.2
Accommodation, and Food	16.2	-1.3	1.0	3.7	3.9	1.3	0.2	4.0	1.6	0.0
Amusement, Gambling and Recreation	5.2	15.1	2.6	2.9	-1.9	-10.8	-12.7	6.1	2.5	6.1
Government	2.6	-0.3	-1.9	-4.4	-2.9	0.0	-0.4	-1.0	0.9	-3.0
BC Industrial Aggregate	**4.0**	**3.4**	**3.5**	**1.0**	**2.5**	**0.8**	**0.2**	**4.0**	**1.3**	**1.1**
High Technology Sector Total	**6.6**	**-3.1**	**16.7**	**-1.6**	**8.5**	**-2.2**	**14.5**	**11.8**	**5.2**	**-1.9**

na: Data not available for specific industry

Source: BC STATS and Statistics Canada

Detailed Table 10. High Technology Sector Employment, by Province, 1992-2002

Province	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Canada	307,860	300,440	303,460	320,850	343,630	375,390	399,380	439,000	471,800	482,950	473,800
British Columbia	26,850	28,630	27,740	32,360	31,850	34,570	33,810	38,710	43,280	45,550	44,690
Alberta	17,710	17,600	19,920	19,370	26,210	30,660	36,320	42,010	45,530	44,050	42,230
Ontario	143,410	136,580	143,160	149,770	156,900	165,520	177,860	193,420	206,340	215,330	213,030
Quebec	98,190	94,790	91,710	99,070	106,150	117,690	116,320	123,930	130,580	138,670	135,400

	% change from previous year									
Province	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Canada	-2.4	1.0	5.7	7.1	9.2	6.4	9.9	7.5	2.4	-1.9
British Columbia	6.6	-3.1	16.7	-1.6	8.5	-2.2	14.5	11.8	5.2	-1.9
Alberta	-0.6	13.2	-2.8	35.3	17.0	18.5	15.7	8.4	-3.3	-4.1
Ontario	-4.8	4.8	4.6	4.8	5.5	7.5	8.7	6.7	4.4	-1.1
Quebec	-3.5	-3.2	8.0	7.1	10.9	-1.2	6.5	5.4	6.2	-2.4

Source: BC STATS and Statistics Canada

Detailed Table 11. High Technology Sector Wages and Salaries,[1] 1992-2002

Value ($ million)

NAICS	INDUSTRY	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Manufacturing Industries		**318.4**	**361.9**	**313.0**	**319.6**	**351.0**	**422.3**	**488.1**	**618.1**	**689.7**	**675.3**	**628.4**
325	Chemicals	29.8	35.3	35.0	38.4	30.8	44.3	44.1	37.0	39.5	38.4	48.2
	Computer & other Electronics	211.7	232.5	196.8	197.6	227.8	272.6	320.0	442.2	507.0	483.3	415.4
33641	Aerospace	18.4	27.8	31.1	34.8	36.9	46.0	57.9	73.3	79.1	77.1	77.7
33911	Medical equipment	58.4	66.3	50.0	48.7	55.4	59.5	66.2	65.6	64.2	76.4	87.2
Service Industries		**737.7**	**791.7**	**824.9**	**1,114.2**	**1,094.3**	**1,228.7**	**1,138.8**	**1,293.3**	**1,510.1**	**1,608.6**	**1,664.1**
51	Information services	76.5	80.8	79.9	84.4	100.5	119.3	130.6	161.0	210.2	242.9	269.8
541330	Engineering services	355.8	387.9	426.7	694.5	593.3	633.6	487.5	490.0	461.8	477.2	486.3
541510	Computer systems design	305.4	323.0	318.3	335.2	400.4	475.8	520.7	642.3	838.2	888.6	908.0
High Technology Sector Total		**1,056.1**	**1,153.6**	**1,137.9**	**1,433.7**	**1,445.3**	**1,651.0**	**1,627.0**	**1,911.4**	**2,199.9**	**2,283.9**	**2,292.5**
BC Industrial Aggregate		**38,412.9**	**40,898.5**	**43,481.3**	**46,353.3**	**47,786.9**	**49,811.7**	**50,533.1**	**51,246.3**	**54,260.0**	**55,405.2**	**56,588.6**

1. Totals are calculated using unrounded data

Detailed Table 11 (ctd). High Technology Sector Wages and Salaries, 1992-2002

% change from previous year

NAICS	INDUSTRY	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Manufacturing Industries		**13.7**	**-13.5**	**2.1**	**9.8**	**20.3**	**15.6**	**26.6**	**11.6**	**-2.1**	**-6.9**
325	Chemicals	18.5	-0.8	9.5	-19.8	44.0	-0.5	-16.0	6.6	-2.7	25.5
	Computer & other Electronics	9.8	-15.4	0.4	15.3	19.6	17.4	38.2	14.7	-4.7	-14.1
33641	Aerospace	50.7	11.9	12.0	6.1	24.4	26.0	26.6	7.9	-2.5	0.7
33911	Medical equipment	13.5	-24.6	-2.6	13.7	7.4	11.2	-0.8	-2.1	19.0	14.0
Service Industries		**7.3**	**4.2**	**35.1**	**-1.8**	**12.3**	**-7.3**	**13.6**	**16.8**	**6.5**	**3.4**
51	Information services	5.7	-1.1	5.7	19.1	18.7	9.4	23.3	30.5	15.6	11.1
541330	Engineering services	9.0	10.0	62.8	-14.6	6.8	-23.1	0.5	-5.8	3.3	1.9
541510	Computer systems design	5.7	-1.4	5.3	19.5	18.8	9.4	23.3	30.5	6.0	2.2
High Technology Sector Total		**9.2**	**-1.4**	**26.0**	**0.8**	**14.2**	**-1.5**	**17.5**	**15.1**	**3.8**	**0.4**
BC Industrial Aggregate		**6.5**	**6.3**	**6.6**	**3.1**	**4.2**	**1.4**	**1.4**	**5.9**	**2.1**	**2.1**

Source: BC STATS and Statistics Canada

Detailed Table 12. High Technology Sector Average Weekly Earnings,[1] 1992-2002

Dollars per employee per week (including overtime)

NAICS	INDUSTRY	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Manufacturing Industries		**560**	**580**	**630**	**610**	**620**	**630**	**670**	**700**	**720**	**720**	**760**
325	Chemicals	740	790	800	780	730	830	880	790	820	790	880
	Computer & other Electronics	660	700	730	700	740	760	820	860	870	870	910
33641	Aerospace	730	710	740	770	790	780	890	880	870	840	870
33911	Medical equipment	510	560	570	530	610	600	610	610	600	620	660
Service Industries		**840**	**850**	**850**	**950**	**960**	**1,000**	**1,000**	**1,020**	**1,060**	**1,040**	**1,050**
51	Information services	670	720	720	780	790	840	840	860	890	880	910
541330	Engineering services	860	800	810	930	940	950	930	950	950	950	950
541510	Computer systems design	890	970	960	1,040	1,060	1,120	1,120	1,150	1,190	1,150	1,160
High Technology Sector Total		**740**	**750**	**780**	**860**	**860**	**880**	**880**	**900**	**930**	**930**	**960**
BC Industrial Aggregate		**570**	**580**	**600**	**620**	**630**	**640**	**640**	**650**	**660**	**670**	**670**

1. Totals are calculated using unrounded data

Detailed Table 12 (ctd). High Technology Sector Average Weekly Earnings, 1992-2002

% change from previous year

NAICS	INDUSTRY	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Manufacturing Industries		**3.8**	**8.3**	**-2.2**	**2.1**	**1.2**	**6.5**	**3.7**	**2.6**	**0.8**	**5.9**
325	Chemicals	7.2	1.5	-2.2	-7.0	13.4	6.3	-9.6	3.5	-3.8	11.4
	Computer & other Electronics	5.7	3.9	-3.6	6.2	2.6	7.0	5.7	1.2	-0.2	4.1
33641	Aerospace	-1.9	3.0	4.3	2.7	-1.2	14.5	-1.8	-0.3	-3.6	3.6
33911	Medical equipment	9.9	0.1	-6.1	15.7	-2.2	1.3	-0.4	-0.9	2.9	7.4
Service Industries		**0.8**	**0.0**	**11.5**	**1.5**	**3.8**	**-0.3**	**2.8**	**3.4**	**-2.1**	**0.8**
51	Information services	8.7	-0.5	8.4	1.2	6.4	0.0	2.3	3.6	-0.9	2.8
541330	Engineering services	-6.4	1.1	15.1	1.0	1.1	-2.4	2.2	0.3	-0.2	-0.8
541510	Computer systems design	9.0	-0.7	8.6	1.2	6.5	-0.1	2.2	3.6	-3.5	1.5
High Technology Sector Total		**1.6**	**3.7**	**9.4**	**1.0**	**2.3**	**0.0**	**2.2**	**3.4**	**-0.6**	**3.0**
BC Industrial Aggregate		**2.4**	**2.8**	**3.0**	**2.1**	**1.7**	**0.7**	**1.2**	**1.8**	**0.8**	**1.0**

Source: BC STATS and Statistics Canada

Detailed Table 13. High Technology Sector Establishments,[1] by Development Region and Regional District, 1999-200

Development Region / Regional District		1999			2000			2001			2002		
		Mfg	Service	Total	Mfg	Service	Total	Mfg	Service	Total	Mfg	Service	Total
Vancouver Island/Coast		**109**	**715**	**824**	**110**	**771**	**881**	**101**	**774**	**875**	**110**	**792**	**902**
23	Alerberni-Clayoquot	4	10	14	4	9	13	2	13	15	2	11	13
17	Capital	63	464	527	64	520	584	61	542	603	66	565	631
45	Central Coast	0	1	1	0	0	0	0	0	0	0	2	2
25	Comox-Strathcona	18	54	72	16	63	79	14	58	72	16	53	69
19	Cowichan Valley	5	56	61	9	49	58	8	42	50	7	44	51
43	Mount Waddington	0	6	6	0	6	6	0	7	7	1	7	8
21	Nanaimo	19	112	131	17	113	130	16	106	122	18	102	120
27	Powell River	0	12	12	0	11	11	0	6	6	0	8	8
Mainland/Southwest		**618**	**2,790**	**3,408**	**599**	**3,095**	**3,694**	**593**	**3,201**	**3,794**	**570**	**3,105**	**3,675**
09	Fraser Valley	32	79	111	29	88	117	32	98	130	36	91	127
15	Greater Vancouver	572	2,664	3,236	558	2,955	3,513	550	3,047	3,597	524	2,957	3,481
31	Squamish-Lillooet	8	27	35	6	31	37	5	34	39	4	34	38
29	Sunshine Coast	6	20	26	6	21	27	6	22	28	6	23	29
Thompson/Okanagan		**89**	**329**	**418**	**86**	**343**	**429**	**76**	**339**	**415**	**78**	**330**	**408**
35	Central Okanagan	42	118	160	40	137	177	38	132	170	43	135	178
39	Columbia-Shuswap	4	42	46	3	38	41	3	43	46	2	38	40
37	North Okanagan	16	43	59	18	47	65	14	48	62	11	41	52
07	Okanagan-Similkameen	10	44	54	10	35	45	8	35	43	10	34	44
33	Thompson-Nicola	17	82	99	15	86	101	13	81	94	12	82	94
Kootenay		**21**	**98**	**119**	**25**	**100**	**125**	**22**	**92**	**114**	**18**	**93**	**111**
03	Central Kootenay	8	49	57	9	52	61	9	47	56	8	41	49
01	East Kootenay	9	33	42	10	33	43	8	24	32	5	27	32
05	Kootenay Boundary	4	16	20	6	15	21	5	21	26	5	25	30
Cariboo		**24**	**131**	**155**	**27**	**124**	**151**	**27**	**125**	**152**	**23**	**115**	**138**
41	Cariboo	9	36	45	10	33	43	7	36	43	7	34	41
53	Fraser-Fort George	15	95	110	17	91	108	20	89	109	16	81	97
North Coast		**4**	**24**	**28**	**3**	**28**	**31**	**3**	**26**	**29**	**3**	**25**	**28**
49	Kitimat-Stikine	4	16	20	3	20	23	3	17	20	3	14	17
47	Skeena-Queen Charlotte	0	8	8	0	8	8	0	9	9	0	11	11
Nechako		**4**	**24**	**28**	**4**	**28**	**32**	**4**	**26**	**30**	**4**	**26**	**30**
51	Bulkley-Nechako	4	24	28	4	27	31	4	26	30	4	26	30
57	Stikine	-	-	-	-	1	1	-	-	-	-	-	-
Northeast		**5**	**31**	**36**	**9**	**36**	**45**	**4**	**36**	**40**	**8**	**35**	**43**
55	Peace River	5	31	36	8	36	44	3	36	39	7	34	41
59	Northern Rockies	0	0	0	1	0	1	1	0	1	1	1	2
Total		875	4,146	5,021	863	4,528	5,391	830	4,622	5,452	814	4,525	5,339

1. Establishments with zero employees are not included in these figures.
Figures do not add to totals because some establishments did not have geographic codes.
Source: BC STATS and Statistics Canada

Detailed Table 14. High Technology Sector Establishments,[1] by Industry, 1998-2002

NAICS	Industry	1998	1999	2000	2001	2002
Manufacturing Industries		**973**	**875**	**863**	**830**	**814**
325	Chemicals	58	65	64	56	53
	Computer & other Electronics	406	435	436	404	390
33641	Aerospace	58	58	56	53	51
33911	Medical equipment	320	317	307	317	320
Service Industries		**3,899**	**4,146**	**4,528**	**4,622**	**4,525**
51	Information services	206	212	246	255	246
541330	Engineering services	1,934	1,956	1,930	1,845	1,792
541510	Computer systems design	1,759	1,978	2,352	2,522	2,487
High Technology Sector		**4,872**	**5,021**	**5,391**	**5,452**	**5,339**

1. Establishments with zero employees are not included in these figures.

Source: BC STATS, Statistics Canada Business Register Division.

Detailed Table 14. (ctd.) High Technology Sector Establishments,[1] by Industry, 1998-2002

NAICS	Industry	%change from previous year 1999	2000	2001	2002
Manufacturing Industries		**-10.1**	**-1.4**	**-3.8**	**-1.9**
325	Chemicals	12.1	-1.5	-12.5	-5.4
	Computer & other Electronics	7.1	0.2	-7.3	-3.5
33641	Aerospace	0.0	-3.4	-5.4	-3.8
33911	Medical equipment	-0.9	-3.2	3.3	0.9
Service Industries		**6.3**	**9.2**	**2.1**	**-2.1**
51	Information services	2.9	16.0	3.7	-3.5
541330	Engineering services	1.1	-1.3	-4.4	-2.9
541510	Computer systems design	12.5	18.9	7.2	-1.4
High Technology Sector		**3.1**	**7.4**	**1.1**	**-2.1**

1. Establishments with zero employees are not included in these figures.

Source: BC STATS, Statistics Canada Business Register Division.

Detailed Table 15. High Technology Sector Establishments, by Industry and Establishment Size, 2002

		Number of establishments, by number of employees							
NAICS	Industry	1 to 4	5 to 9	10 to 19	20 to 49	50 plus	Subtotal	None	Total
Manufacturing Industries		**426**	**119**	**96**	**95**	**78**	**814**	**436**	**1,250**
325	Chemicals	19	12	8	10	4	53	28	81
	Computer & other Electronics	181	47	44	63	55	390	296	686
33641	Aerospace	31	5	4	5	6	51	41	92
33911	Medical equipment	195	55	40	17	13	320	71	391
Service Industries		**3,098**	**551**	**366**	**325**	**185**	**4,525**	**6,266**	**10,791**
51	Information services	118	33	20	39	36	246	150	396
541330	Engineering services	1,208	238	160	128	58	1,792	2,122	3,914
541510	Computer systems design	1,772	280	186	158	91	2,487	3,994	6,481
Total for sector		**3,524**	**670**	**462**	**420**	**263**	**5,339**	**6,702**	**12,041**
Total for all Industries		**91,818**	**27,355**	**18,511**	**12,604**	**7,364**	**157,652**	**157,625**	**315,277**

Source: BC STATS, Statistics Canada Business Register Division.

6 DETAILED TABLES II
International Trade in High Technology Goods and Services

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Detailed Table 16. Shipments and Exports of BC High Technology Goods and Total Processed Goods, 1990-2002

Value ($ million)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
High Technology Goods													
Total Shipments[1]	758	694	919	963	1,165	1,325	1,542	1,765	1,889	2,339	2,881	2,585	2,205
Exports	198.4	200	355	450	391	407	451	581	769	840	923	748	685
Exports as % of Shipments	26.2	28.8	38.7	46.8	33.5	30.7	29.2	32.9	40.7	35.9	32.0	28.9	31.0
Total Processed Goods[2]													
Total Shipments	25,329	23,259	24,398	26,583	30,333	34,207	32,932	33,496	31,757	35,616	37,768	34,106	34,236
Exports	13,013	11,784	13,272	15,835	19,245	22,845	21,304	21,845	20,977	24,025	25,286	22,970	22,719
Exports as % of Shipments	51.4	50.7	54.4	59.6	63.4	66.8	64.7	65.2	66.1	67.5	67.0	67.3	66.4

% change from previous year

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
High Technology Goods												
Total Shipments	-8.4	32.4	4.8	21.0	13.7	16.4	14.5	7.0	23.8	23.2	-10.3	-14.7
Exports	0.8	77.6	26.8	-13.2	4.1	10.8	29.0	32.3	9.2	9.9	-19.0	-8.5
Total Processed Goods												
Total Shipments	-8.2	4.9	9.0	14.1	12.8	-3.7	1.7	-5.2	12.2	6.0	-9.7	0.4
Exports	-9.4	12.6	19.3	21.5	18.7	-6.7	2.5	-4.0	14.5	5.2	-9.2	-1.1

1. Shipments represent revenues from all production, sales, services and related activities in the manufacturing sector.
2. "Processed goods" excludes selected agricultural, fish, logging, mining and energy products not produced by BC manufacturing industries.

Source: BC STATS and Statistics Canada

Detailed Table 17. Domestic Exports of High Technology Goods, by Destination and Mode of Transport, 1990-2002

Destination	Mode of Transport[2]	Value ($ million)[1] 1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
United States	Land	86.8	108.1	222.7	276.5	184.7	160.3	159.1	240.7	384.8	408.6	477.4	343.8	384.2
	Sea	0.3	0.1	0.1	0.1	0.5	1.7	1.7	5.6	3.4	5.2	1.5	1.4	0.0
	Air	25.1	25.6	40.0	49.6	85.4	124.4	127.9	168.1	208.4	266.2	294.1	251.2	173.9
	Total	**112.2**	**133.8**	**262.7**	**326.3**	**270.6**	**286.4**	**288.7**	**414.4**	**596.6**	**680.0**	**773.0**	**596.4**	**558.1**
Pacific Rim (total)	Land	2.4	1.7	4.2	15.5	6.6	7.1	12.3	14.9	8.5	6.8	0.4	1.0	7.5
	Sea	2.2	2.8	6.0	8.5	5.6	5.5	12.1	5.6	8.9	4.7	9.4	4.6	13.7
	Air	25.6	27.4	38.7	44.1	53.8	59.5	81.8	94.1	78.7	72.3	56.9	27.8	25.9
	Total	**30.2**	**31.9**	**48.9**	**68.1**	**65.9**	**72.1**	**106.2**	**114.6**	**96.1**	**83.8**	**66.8**	**33.3**	**47.2**
Japan	*Land*	0.0	1.0	3.0	1.7	1.8	2.2	3.1	2.7	0.0	0.4	0.1	0.3	4.5
	Sea	0.2	0.0	0.5	0.1	0.3	0.6	1.0	0.3	0.9	0.3	2.1	0.7	12.1
	Air	9.6	7.6	7.1	7.8	8.7	10.8	14.6	16.3	7.7	4.5	28.1	8.7	5.4
	Total	**9.8**	**8.6**	**10.6**	**9.6**	**10.8**	**13.6**	**18.7**	**19.3**	**8.6**	**5.2**	**30.4**	**9.7**	**22.0**
Other Pacific Rim	*Land*	2.4	0.7	1.2	13.8	4.8	4.9	9.2	12.2	8.5	6.4	0.3	0.7	3.1
	Sea	2.0	2.8	5.5	8.3	5.2	4.9	11.0	5.4	8.1	4.4	7.4	3.8	1.6
	Air	16.0	19.7	31.6	36.3	45.0	48.7	67.2	77.8	70.9	67.8	28.8	19.1	20.5
	Total	**20.4**	**23.3**	**38.3**	**58.5**	**55.1**	**58.5**	**87.4**	**95.3**	**87.5**	**78.6**	**36.4**	**23.6**	**25.1**
European Union	Land	13.9	0.0	0.1	0.1	0.9	1.6	0.1	1.5	5.6	0.2	1.5	3.0	0.5
	Sea	2.1	1.3	1.8	9.4	4.4	0.1	2.4	0.3	1.5	4.6	0.9	8.3	5.3
	Air	22.9	15.1	15.1	18.4	25.5	30.3	24.9	30.0	49.3	48.0	56.9	73.5	42.3
	Total	**39.0**	**16.4**	**17.1**	**27.9**	**30.7**	**32.1**	**27.4**	**31.9**	**56.4**	**52.9**	**59.3**	**84.8**	**48.1**
All Other Countries	Land	1.4	2.6	1.4	3.2	2.0	0.8	1.7	1.6	0.7	1.6	2.2	7.1	1.6
	Sea	4.1	1.2	8.3	10.4	1.7	0.8	1.9	3.8	1.4	1.2	2.9	9.1	1.9
	Air	11.6	14.0	16.9	14.4	19.7	14.7	24.7	15.1	18.0	20.6	18.8	17.3	27.8
	Total	**17.0**	**17.9**	**26.6**	**28.0**	**23.4**	**16.3**	**28.3**	**20.4**	**20.1**	**23.4**	**24.0**	**33.5**	**31.2**
Total	Land	104.5	112.4	228.4	295.3	194.1	169.8	173.2	258.8	399.7	417.2	481.6	354.9	393.8
	Sea	8.7	5.5	16.2	28.4	12.2	8.1	18.1	15.3	15.2	15.7	14.7	23.4	20.9
	Air	85.2	82.0	110.7	126.6	184.4	228.9	259.4	307.3	354.4	407.2	426.7	369.8	269.9
	Total	**198.4**	**200.0**	**355.2**	**450.3**	**390.7**	**406.8**	**450.6**	**581.4**	**769.2**	**840.1**	**923.1**	**748.1**	**684.6**

1. Totals may not equal the sum of Land Sea and Air due to the fact that some respondents did not fill in the survey completely.
2. Shipments by land to overseas markets represent the export of BC produced high technology products transshipped by US Ports such as Seattle or Portland.

Source: BC STATS and Statistics Canada

Detailed Table 17 (ctd). Domestic Exports of High Tech. Goods, by Destination and Mode of Transport, 1990-2002

		% of Exports to Destination[1]												
Destination	**Mode of Transport[2]**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
United States	Land	77.4	80.8	84.8	84.8	68.2	56.0	55.1	58.1	64.5	60.1	61.8	57.6	68.8
	Sea	0.3	0.1	0.0	0.0	0.2	0.6	0.6	1.4	0.6	0.8	0.2	0.2	0.0
	Air	22.4	19.1	15.2	15.2	31.6	43.4	44.3	40.6	34.9	39.1	38.0	42.1	31.2
Pacific Rim	Land	8.0	5.3	8.5	22.7	10.0	9.9	11.6	13.0	8.9	8.1	0.7	3.0	16.0
(total)	Sea	7.1	8.9	12.3	12.4	8.5	7.6	11.4	4.9	9.3	5.6	14.1	13.7	29.1
	Air	84.8	85.8	79.1	64.8	81.5	82.5	77.1	82.1	81.8	86.3	85.2	83.3	54.9
Japan	*Land*	0.0	11.3	28.0	17.4	16.6	16.5	16.6	14.2	0.0	8.3	0.5	3.1	20.3
	Sea	1.8	0.2	4.9	1.4	3.0	4.4	5.5	1.3	10.0	5.1	6.8	7.7	55.1
	Air	98.2	88.5	67.1	81.2	80.3	79.1	77.9	84.5	89.9	86.6	92.7	89.2	24.6
Other Pacific	*Land*													
Rim		11.8	3.0	3.1	23.6	8.7	8.4	10.5	12.8	9.7	8.1	0.8	2.9	12.2
	Sea	9.7	12.1	14.4	14.2	9.5	8.3	12.6	5.6	9.2	5.6	20.2	16.2	6.4
	Air	78.4	84.9	82.5	62.2	81.8	83.3	76.9	81.6	81.0	86.3	78.9	81.0	81.5
European Union	Land	35.7	0.3	0.8	0.4	2.8	5.1	0.5	4.8	9.9	0.5	2.6	3.6	1.0
	Sea	5.4	8.0	10.7	33.5	14.2	0.4	8.6	1.0	2.7	8.8	1.4	9.8	11.0
	Air	58.8	91.7	88.5	66.0	82.9	94.5	90.9	94.3	87.4	90.8	95.9	86.6	88.1
All Other	Land	8.0	14.8	64.3	11.3	8.4	4.6	6.1	7.7	3.7	6.7	9.3	21.3	5.2
Countries	Sea	24.0	6.9	4.5	37.2	7.2	5.1	6.7	18.5	6.8	5.1	12.2	27.2	5.9
	Air	68.0	78.4	31.2	51.5	84.4	90.3	87.2	73.8	89.5	88.2	78.5	51.5	88.9
Total	Land	52.7	56.2	64.3	65.6	49.7	41.7	38.4	44.5	52.0	49.7	52.2	47.4	57.5
	Sea	4.4	2.7	4.5	6.3	3.1	2.0	4.0	2.6	2.0	1.9	1.6	3.1	3.0
	Air	43.0	41.0	31.2	28.1	47.2	56.3	57.6	52.9	46.1	48.5	46.2	49.4	39.4

1. Percentages may not add to 100 due to rounding.
2. Shipments by land to overseas markets represent the export of BC produced high technology products transshipped by US Ports such as Seattle or Portland.

Source: BC STATS and Statistics Canada

Detailed Table 18. Top 25 High Technology Domestic Export Commodities, 2002

HS Code	Commodity Description [1]	Value ($000,000)	% Total Exports
90181900	Electro-diagnostic apparatus, nes	84.4	12.3
88033000	Aircraft parts, nes	62.2	9.1
85252000	Transmission apparatus, for radio-telephony incorporating reception apparatus	59.0	8.6
90191000	Mechano-therapy appl; massage app; psychological aptitude-testing apparatus	58.8	8.6
90328900	Automatic regulating or controlling instruments and apparatus, nes	38.3	5.6
90138000	Optical devices, appliances and instruments, nes, of this Chapter	34.6	5.1
85253000	Television cameras	31.6	4.6
84733000	Parts and accessories of automatic data processing machines & units thereof	20.6	3.0
85251000	Transmission apparatus for radio-telephony, radio-broadcasting or television	19.7	2.9
90158000	Surveying, hydrographic, oceanographic, meteorological or geophysical inst nes	19.0	2.8
85243190	Rec disc laser reading syst for reproducing phenomena o/t sound/image, o/t software, nes	18.8	2.7
28444019	Radioactive elements & isotopes and compounds, nes	17.9	2.6
90148000	Navigational instruments and appliances nes	15.2	2.2
88021200	Helicopters of an unladen weight exceeding 2,000 kg	13.8	2.0
85254000	Still image video cameras and other video camera recorders; digital cameras	10.5	1.5
90213900	Artificial parts of the body, nes	10.4	1.5
84719000	Other data processing machines, nes	10.1	1.5
85219000	Video recording or reproducing apparatus nes	9.9	1.4
88021100	Helicopters of an unladen weight not exceeding 2,000 kg	9.5	1.4
85179000	Parts of electrical apparatus for line telephone or line telegraphy	9.2	1.3
84735000	Parts & access equally suitable for use with machines of two or more of 84.69 to 84.72 [2]	8.7	1.3
85173000	Telephonic or telegraphic switching apparatus	8.2	1.2
84716000	Input or output units, w/n containing storage units in the same housing	7.2	1.0
84705000	Cash registers	5.7	0.8
85269200	Radio remote control apparatus	5.7	0.8
Subtotal		**589.0**	**86.0**
	All Other High Technology Commodities	95.6	14.0
Total		**684.6**	**100.0**

HS code = Harmonized System commodity code; NES = Not Elsewhere Specified

1. Commodity descriptions are drawn from the approved Harmonized System coding manual. They contain numerous abbreviations that have been left in original form in this table.
2. Refers to automatic data processing machines and other office machines.

Source: BC STATS and Statistics Canada

Detailed Table 19. Top 25 High Technology Import Commodities, 2002

HS Code	Commodity Description [1]	Value ($000,000)	% Total Imports
8802400014	Airplanes, passenger, non-military, of an unladen weight >15,000kg,new	377.1	9.2
8471500090	Digital process units, o/t 8471.41/49, w/n cntg strg, input/output o/t w CRT, nes	164.5	4.0
3004900079	Medicaments nes, for human use, in dosage	164.3	4.0
8473302000	Printed circuit assemblies of the machines of heading 84.71[2]	161.3	3.9
8471300000	Portable digital auto data process mach, ≤ 10 kg, with CPU, keyboard & display	138.8	3.4
8803300000	Parts of airplanes or helicopters nes	126.9	3.1
8473309000	Parts & access (o/t printed circuit assy) of the machines of heading 84.71, nes	126.4	3.1
8525400010	Still image video cameras and other video camera recorders, colour	78.1	1.9
8802400019	Airplanes & aircraft, non-military, of an unladen weight >15,000 kg, new, nes	74.3	1.8
8525200090	Transmission apparatus, incorporating reception apparatus, nes	73.5	1.8
8471801000	Control or adapter units, o/t form of system	71.6	1.8
8517901030	Printed circuit assemblies of goods of TI 8517.11.00, 8517.19.10, 8517.19.90,etc[3]	68.9	1.7
8473301000	Parts, o/t printed circuit assembly, of printers w/n cntg storage units in same housing	57.1	1.4
8471700013	Other hard magnetic disk drive units, o/t presented in form of system	52.2	1.3
8521901000	Laser video disc players, w/n incorporating video tuner	51.6	1.3
8528129910	App for the reception of television signals relayed by TV satellite, colour, nes	51.1	1.3
8471491011	Digital process units w/n cntg in same hsng, strg unit, input/output, with colour CRT	50.0	1.2
8802120011	Helicopters, military, of an unladen weight > 2,000 kg, new	49.4	1.2
8517909100	Parts, of telephone sets/videophones/ teleph switch app, etc or telephonic app, nes	45.1	1.1
8802300014	Airplanes, non-military, multiple turbofan eng, unladen weight >4536kg, ≤15000kg new	42.8	1.0
8524391000	Recorded discs (software), for reproducing image only, other than magnetic, nes	41.2	1.0
8517904300	Parts, incorporating ptd crt asy of telephonic switching app/carrier-cur lines etc, nes	40.3	1.0
8471500011	Digital process units o/t 8471.41/49 w/n presented with rest of system, w colour CRT	40.0	1.0
8528129500	Colour non-high definition TV receiver, projection type, with cathode ray tube, etc	37.6	0.9
8524310011	Rec magnetic discs, software, pre-packaged, for automatic data processing mach, sold retail	37.3	0.9
Subtotal		**2,221.5**	**54.4**
	All Other High Technology Commodities	1,864.7	45.6
Total		**4,086.2**	**100.0**

HS code = Harmonized System commodity code; NES = Not Elsewhere Specified

1. Commodity descriptions are drawn from the approved Harmonized System coding manual. They contain numerous abbreviations that have been left in original form in this table.
2. Refers to automatic data processing machines, magnetic or optical readers, etc.
3. Refers to telephone sets, videophones.

Source: BC STATS and Statistics Canada

Detailed Table 20. Domestic Exports of High Technology Goods and Total Goods, by Destination, 1990-2002

Value ($ million)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
High Technology Exports													
United States	112.2	133.8	262.7	326.3	270.6	286.4	288.7	414.4	596.6	680.0	773.0	596.4	558.1
Mexico	0.5	0.6	0.7	1.3	0.8	1.1	0.9	0.6	1.1	3.1	0.9	0.9	1.7
European Union	39.0	16.4	17.1	27.9	30.7	32.1	27.4	31.9	56.4	52.9	59.3	84.8	48.1
United Kingdom	*12.4*	*3.1*	*4.9*	*12.0*	*8.1*	*6.1*	*8.7*	*7.9*	*6.9*	*6.9*	*13.0*	*20.4*	*21.9*
France	*16.0*	*3.4*	*2.1*	*3.1*	*2.6*	*4.6*	*2.6*	*5.9*	*6.6*	*6.7*	*1.5*	*5.3*	*4.0*
Germany	*2.9*	*1.8*	*2.0*	*4.3*	*6.2*	*5.0*	*5.0*	*4.5*	*13.7*	*6.2*	*5.2*	*7.1*	*7.3*
Italy	*1.1*	*1.9*	*1.4*	*1.2*	*0.5*	*0.8*	*3.2*	*0.6*	*2.5*	*2.2*	*18.5*	*31.6*	*2.9*
Netherlands	*1.0*	*2.7*	*2.0*	*1.8*	*5.5*	*6.8*	*3.2*	*8.2*	*11.3*	*9.1*	*5.0*	*5.2*	*2.8*
Pacific Rim	30.2	31.9	48.9	68.1	65.9	72.1	106.2	114.6	96.1	83.8	66.8	33.3	47.2
Hong Kong	*1.8*	*5.1*	*18.0*	*17.1*	*20.2*	*25.8*	*13.6*	*21.9*	*32.0*	*12.0*	*6.5*	*6.2*	*3.3*
PR China	*3.4*	*2.7*	*4.8*	*5.2*	*4.4*	*3.3*	*16.4*	*20.1*	*27.1*	*17.7*	*2.3*	*3.0*	*4.1*
Japan	*9.8*	*8.6*	*10.6*	*9.6*	*10.8*	*13.6*	*18.7*	*19.3*	*8.6*	*5.2*	*30.4*	*9.7*	*22.0*
South Korea	*1.8*	*5.2*	*1.5*	*5.7*	*10.4*	*8.1*	*8.7*	*16.7*	*4.6*	*11.9*	*9.1*	*6.2*	*4.3*
Taiwan	*1.6*	*1.1*	*2.9*	*6.0*	*3.1*	*4.0*	*8.7*	*12.2*	*14.9*	*24.2*	*4.3*	*2.2*	*4.3*
All Other Countries	16.6	17.3	25.9	26.7	22.6	15.1	27.4	19.8	19.0	20.2	23.0	32.7	29.5
Total	**198.4**	**200.0**	**355.2**	**450.3**	**390.7**	**406.8**	**450.6**	**581.4**	**769.2**	**840.1**	**923.1**	**748.1**	**684.6**
Total Exports													
United States	6,983.4	6,694.9	7,994.3	10,113.4	12,321.6	13,288.0	13,895.1	14,863.1	16,375.0	19,370.7	22,196.1	22,110.1	19,697.7
Mexico	34.2	36.7	53.8	46.8	77.1	54.6	50.5	61.9	60.7	42.2	57.7	83.2	81.1
European Union	2,652.6	2,243.9	2,038.8	1,561.7	1,961.5	2,881.9	1,959.5	2,064.1	2,008.4	1,918.0	2,569.4	2,115.4	1,797.6
United Kingdom	*692.1*	*573.4*	*543.9*	*310.4*	*328.1*	*377.7*	*336.4*	*288.7*	*302.5*	*319.2*	*381.1*	*353.7*	*337.4*
France	*289.5*	*230.2*	*167.6*	*138.6*	*169.2*	*317.6*	*182.3*	*183.5*	*175.8*	*167.1*	*217.0*	*167.8*	*149.7*
Germany	*517.6*	*449.7*	*428.3*	*349.4*	*474.5*	*694.4*	*409.1*	*475.6*	*395.6*	*299.7*	*534.4*	*381.5*	*320.9*
Italy	*347.6*	*309.7*	*304.1*	*266.9*	*412.1*	*646.1*	*435.5*	*474.1*	*439.1*	*445.6*	*617.1*	*531.2*	*428.4*
Netherlands	*201.6*	*189.5*	*152.0*	*135.0*	*101.0*	*184.8*	*164.1*	*204.3*	*251.5*	*235.3*	*174.6*	*211.9*	*222.8*
Pacific Rim	6,372.9	5,799.9	5,845.0	6,886.7	7,953.8	9,857.5	9,226.4	9,023.7	6,969.7	7,179.8	8,176.3	6,689.3	6,703.8
Hong Kong	*91.8*	*94.1*	*125.5*	*149.3*	*192.5*	*270.6*	*258.3*	*352.0*	*272.2*	*280.7*	*298.9*	*235.5*	*228.0*
PR China	*198.7*	*227.1*	*240.5*	*284.2*	*306.5*	*500.6*	*514.1*	*455.5*	*464.5*	*593.2*	*740.7*	*761.0*	*843.2*
Japan	*4,636.0*	*4,046.9*	*4,136.2*	*4,943.5*	*5,701.8*	*6,764.6*	*6,403.8*	*6,003.4*	*4,548.5*	*4,468.3*	*4,890.5*	*4,058.0*	*3,871.4*
South Korea	*609.1*	*631.4*	*509.9*	*580.9*	*743.1*	*979.5*	*866.1*	*953.2*	*678.0*	*754.6*	*930.4*	*757.8*	*764.2*
Taiwan	*240.0*	*262.5*	*265.3*	*347.2*	*361.0*	*482.0*	*354.3*	*457.3*	*399.6*	*375.9*	*421.9*	*332.9*	*353.7*
All Other Countries	607.3	525.1	430.8	455.7	580.1	811.2	633.4	747.9	631.2	602.6	750.4	781.9	760.4
Total	**16,650.3**	**15,300.5**	**16,362.7**	**19,064.2**	**22,894.1**	**26,893.1**	**25,764.8**	**26,760.7**	**26,045.1**	**29,113.3**	**33,749.9**	**31,780.0**	**29,040.5**

Source: BC STATS and Statistics Canada

Detailed Table 20 (ctd). Domestic Exports of High Technology Goods and Total Goods, by Destination, 1990-2002

	% change from previous year											
	1991	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
High Technology Exports												
United States	19.3	96.3	24.2	-17.1	5.8	0.8	43.5	44.0	14.0	13.7	-22.8	-6.4
Mexico	22.5	21.0	85.4	-40.6	50.0	-21.5	-32.2	76.5	191.4	-69.9	-5.8	93.4
European Union	-57.8	3.7	63.7	10.1	4.4	-14.6	16.2	77.1	-6.2	12.1	43.0	-43.3
United Kingdom	*-75.1*	*58.4*	*146.4*	*-32.9*	*-24.9*	*44.0*	*-9.0*	*-13.1*	*0.2*	*87.7*	*57.4*	*7.3*
France	*-78.8*	*-37.0*	*44.0*	*-14.9*	*75.3*	*-42.4*	*125.2*	*11.5*	*0.8*	*-77.6*	*253.7*	*-24.1*
Germany	*-37.2*	*9.9*	*116.4*	*41.9*	*-18.5*	*0.3*	*-10.1*	*201.7*	*-54.4*	*-15.9*	*34.8*	*3.4*
Italy	*61.9*	*-21.9*	*-13.9*	*-57.1*	*58.4*	*278.4*	*-82.7*	*355.6*	*-11.3*	*725.8*	*70.8*	*-90.7*
Netherlands	*163.9*	*-27.3*	*-10.5*	*211.0*	*22.8*	*-52.8*	*156.4*	*37.1*	*-19.4*	*-44.6*	*4.2*	*-45.9*
Pacific Rim	5.5	53.4	39.2	-3.1	9.3	47.3	8.0	-16.1	-12.8	-20.3	-50.1	41.5
Hong Kong	*176.9*	*256.5*	*-5.2*	*18.1*	*27.8*	*-47.1*	*60.8*	*46.3*	*-62.4*	*-45.7*	*-5.2*	*-46.3*
PR China	*-20.0*	*75.0*	*9.5*	*-16.2*	*-25.8*	*400.6*	*23.1*	*34.9*	*-34.9*	*-87.0*	*29.5*	*36.6*
Japan	*-11.9*	*23.5*	*-9.8*	*13.3*	*25.5*	*37.6*	*2.9*	*-55.4*	*-39.5*	*483.0*	*-68.0*	*127.1*
South Korea	*189.2*	*-71.9*	*291.0*	*82.6*	*-22.1*	*6.5*	*92.6*	*-72.2*	*157.9*	*-23.9*	*-31.5*	*-31.5*
Taiwan	*-29.6*	*169.3*	*105.7*	*-48.0*	*28.6*	*115.0*	*40.7*	*21.6*	*62.7*	*-82.4*	*-48.1*	*94.4*
All Other Countries	4.3	49.7	3.3	-15.5	-33.1	81.2	-27.6	-4.0	6.2	14.0	41.8	-9.6
Total Growth	**0.8**	**77.6**	**26.8**	**-13.2**	**4.1**	**10.8**	**29.0**	**32.3**	**9.2**	**9.9**	**-19.0**	**-8.5**
United States	-4.1	19.4	26.5	21.8	7.8	4.6	7.0	10.2	18.3	14.6	-0.4	-10.9
Mexico	7.4	46.7	-13.1	64.9	-29.3	-7.5	22.8	-2.0	-30.5	36.7	44.3	-2.6
European Union	-15.4	-9.1	-23.4	25.6	46.9	-32.0	5.3	-2.7	-4.5	34.0	-17.7	-15.0
United Kingdom	*-17.2*	*-5.1*	*-42.9*	*5.7*	*15.1*	*-10.9*	*-14.2*	*4.8*	*5.5*	*19.4*	*-7.2*	*-4.6*
France	*-20.5*	*-27.2*	*-17.3*	*22.1*	*87.8*	*-42.6*	*0.6*	*-4.2*	*-4.9*	*29.9*	*-22.7*	*-10.8*
Germany	*-13.1*	*-4.8*	*-18.4*	*35.8*	*46.4*	*-41.1*	*16.2*	*-16.8*	*-24.2*	*78.3*	*-28.6*	*-15.9*
Italy	*-10.9*	*-1.8*	*-12.2*	*54.4*	*56.8*	*-32.6*	*8.9*	*-7.4*	*1.5*	*38.5*	*-13.9*	*-19.4*
Netherlands	*-6.0*	*-19.8*	*-11.1*	*-25.2*	*83.0*	*-11.2*	*24.6*	*23.1*	*-6.4*	*-25.8*	*21.3*	*5.1*
Pacific Rim	-9.0	0.8	17.8	15.5	23.9	-6.4	-2.2	-22.8	3.0	13.9	-18.2	0.2
Hong Kong	*2.4*	*33.4*	*18.9*	*29.0*	*40.6*	*-4.5*	*36.3*	*-22.7*	*3.1*	*6.5*	*-21.2*	*-3.2*
PR China	*14.3*	*5.9*	*18.2*	*7.8*	*63.3*	*2.7*	*-11.4*	*2.0*	*27.7*	*24.9*	*2.7*	*10.8*
Japan	*-12.7*	*2.2*	*19.5*	*15.3*	*18.6*	*-5.3*	*-6.3*	*-24.2*	*-1.8*	*9.4*	*-17.0*	*-4.6*
South Korea	*3.7*	*-19.2*	*13.9*	*27.9*	*31.8*	*-11.6*	*10.1*	*-28.9*	*11.3*	*23.3*	*-18.6*	*0.8*
Taiwan	*9.4*	*1.1*	*30.9*	*4.0*	*33.5*	*-26.5*	*29.1*	*-12.6*	*-5.9*	*12.2*	*-21.1*	*6.2*
All Other Countries	-13.5	-18.0	5.8	27.3	39.8	-21.9	18.1	-15.6	-4.5	24.5	4.2	-2.8
Total Growth	**-8.1**	**6.9**	**16.5**	**20.1**	**17.5**	**-4.2**	**3.9**	**-2.7**	**11.8**	**15.9**	**-5.8**	**-8.6**

Source: BC STATS and Statistics Canada

Detailed Table 21. Imports of High Technology, by Country of Origin, 1990-2002

Value ($ million)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
High Technology Imports													
United States	964.8	1,018.4	1,134.2	1,198.0	1,625.8	1,627.4	1,740.0	2,103.6	2,319.2	2,305.6	2,385.9	2,233.0	1,921.7
Mexico	17.6	15.1	13.4	22.1	52.3	60.5	72.6	84.5	88.7	126.3	169.4	203.5	214.9
European Union	195.1	240.2	269.3	192.2	258.1	256.1	302.0	502.6	492.7	661.7	647.4	768.9	738.2
United Kingdom	*46.6*	*33.2*	*46.9*	*45.0*	*71.8*	*81.7*	*84.5*	*89.2*	*102.6*	*144.0*	*324.2*	*165.8*	*138.4*
France	*71.2*	*127.8*	*142.6*	*57.7*	*67.6*	*57.0*	*109.2*	*284.1*	*243.5*	*360.9*	*145.9*	*360.3*	*314.9*
Germany	*27.7*	*33.2*	*33.3*	*31.6*	*44.1*	*45.9*	*49.5*	*49.9*	*58.5*	*69.1*	*70.8*	*106.1*	*89.2*
Italy	*7.4*	*8.6*	*8.2*	*14.3*	*24.7*	*20.7*	*9.4*	*13.5*	*13.9*	*11.0*	*11.4*	*35.7*	*69.5*
Netherlands	*12.4*	*7.3*	*6.7*	*8.7*	*8.1*	*8.5*	*7.9*	*7.1*	*7.9*	*8.4*	*12.7*	*17.9*	*32.2*
Pacific Rim	245.8	294.0	348.2	432.6	625.5	690.7	608.0	830.8	913.9	936.7	977.3	915.1	943.0
Hong Kong	*11.0*	*12.5*	*13.9*	*16.3*	*18.3*	*20.2*	*13.7*	*20.4*	*17.6*	*20.7*	*18.5*	*12.8*	*10.5*
PR China	*1.4*	*4.1*	*6.4*	*11.0*	*21.3*	*27.6*	*32.5*	*46.0*	*53.6*	*71.2*	*101.2*	*144.5*	*207.7*
Japan	*138.2*	*156.9*	*176.3*	*191.1*	*248.0*	*281.0*	*232.5*	*303.7*	*319.6*	*320.5*	*316.1*	*272.0*	*246.8*
South Korea	*26.9*	*33.1*	*37.1*	*50.4*	*82.8*	*100.5*	*69.0*	*80.0*	*75.7*	*77.3*	*99.5*	*86.3*	*85.7*
Taiwan	*30.0*	*36.2*	*49.6*	*64.6*	*76.9*	*68.3*	*76.7*	*123.0*	*160.7*	*175.2*	*165.4*	*157.6*	*143.0*
All Other Countries	48.1	61.2	66.7	85.0	125.3	122.6	120.3	137.3	163.6	219.1	295.4	359.3	269.8
Total Value	**1,471.3**	**1,628.9**	**1,831.8**	**1,930.0**	**2,687.0**	**2,757.2**	**2,842.9**	**3,658.8**	**3,978.1**	**4,249.3**	**4,475.3**	**4,479.8**	**4,087.7**

% change from previous year

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
High Technology Imports												
United States	5.6	11.4	5.6	35.7	0.1	6.9	20.9	10.3	-0.6	3.5	-6.4	-13.9
Mexico	-14.2	-11.5	65.0	137.2	15.5	20.0	16.5	5.0	42.3	34.1	20.2	5.6
European Union	23.1	12.1	-28.6	34.3	-0.8	17.9	66.4	-2.0	34.3	-2.2	18.8	-4.0
United Kingdom	*-28.7*	*41.1*	*-4.1*	*59.5*	*13.9*	*3.3*	*5.6*	*15.0*	*40.4*	*125.1*	*-48.9*	*-16.5*
France	*79.5*	*11.6*	*-59.5*	*17.1*	*-15.7*	*91.5*	*160.3*	*-14.3*	*48.2*	*-59.6*	*146.9*	*-12.6*
Germany	*20.2*	*0.1*	*-5.0*	*39.4*	*4.0*	*8.0*	*0.8*	*17.1*	*18.1*	*2.5*	*49.8*	*-16.0*
Italy	*15.7*	*-4.0*	*74.2*	*72.4*	*-16.0*	*-54.9*	*44.4*	*3.2*	*-21.2*	*3.3*	*214.7*	*94.5*
Netherlands	*-41.6*	*-7.3*	*29.4*	*-6.4*	*4.8*	*-7.0*	*-10.7*	*11.4*	*6.5*	*50.5*	*41.5*	*79.9*
Pacific Rim	19.6	18.4	24.2	44.6	10.4	-12.0	36.6	10.0	2.5	4.3	-6.4	3.0
Hong Kong	*13.5*	*11.4*	*17.3*	*12.5*	*10.0*	*-32.3*	*49.5*	*-13.9*	*17.8*	*-10.6*	*-30.8*	*-17.8*
PR China	*185.9*	*57.1*	*70.6*	*93.9*	*29.4*	*17.9*	*41.5*	*16.4*	*32.9*	*42.1*	*42.7*	*43.8*
Japan	*13.6*	*12.3*	*8.4*	*29.8*	*13.3*	*-17.2*	*30.6*	*5.2*	*0.3*	*-1.4*	*-14.0*	*-9.3*
South Korea	*22.9*	*12.0*	*35.9*	*64.4*	*21.4*	*-31.4*	*15.9*	*-5.4*	*2.2*	*28.7*	*-13.3*	*-0.6*
Taiwan	*20.4*	*37.0*	*30.3*	*19.1*	*-11.2*	*12.4*	*60.3*	*30.6*	*9.0*	*-5.6*	*-4.7*	*-9.2*
All Other Countries	27.1	9.1	27.5	47.3	-2.1	-1.9	14.1	19.2	34.0	34.8	21.6	-24.9
Total Growth	**10.7**	**12.5**	**5.4**	**39.2**	**2.6**	**3.1**	**28.7**	**8.7**	**6.8**	**5.3**	**0.1**	**-8.8**

Source: BC STATS and Statistics Canada

Detailed Table 22. Balance of Trade in High Technology Goods, by Country, 1990-2002

	Balance ($ million)												
	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
High Technology Commodities													
United States	-852.6	-884.6	-824.6	-798.4	-1,284.0	-1,189.0	-1,247.6	-1,497.3	-1,468.1	-1,228.2	-814.0	-1,364.8	-1,128.0
Mexico	-17.1	-14.5	-12.3	-20.8	-51.6	-59.3	-71.6	-83.9	-87.6	-122.9	-168.4	-202.3	-211.2
European Union	-156.1	-223.7	-249.5	-157.2	-223.7	-219.6	-269.2	-461.8	-427.2	-590.3	-536.8	-653.6	-667.0
United Kingdom	*-34.2*	*-30.2*	*-40.6*	*-28.2*	*-62.9*	*-74.9*	*-73.1*	*-78.1*	*-93.0*	*-133.8*	*-299.1*	*-121.9*	*-106.2*
France	*-55.2*	*-124.4*	*-140.1*	*-54.4*	*-64.5*	*-52.0*	*-105.9*	*-276.3*	*-234.7*	*-345.3*	*-128.6*	*-354.4*	*-309.6*
Germany	*-24.7*	*-31.4*	*-30.9*	*-26.5*	*-36.6*	*-38.6*	*-43.5*	*-43.5*	*-43.4*	*-60.2*	*-55.1*	*-97.8*	*-75.8*
Italy	*-6.2*	*-6.7*	*-6.6*	*-13.1*	*-24.1*	*-10.8*	*-6.1*	*-12.7*	*-11.2*	*-8.5*	*7.2*	*-1.4*	*-65.3*
Netherlands	*-11.4*	*-4.5*	*-4.4*	*-6.8*	*-2.4*	*-1.3*	*-4.4*	*1.3*	*4.3*	*1.7*	*-7.6*	*-12.6*	*-29.0*
Pacific Rim	-215.6	-262.1	-294.9	-349.4	-543.2	-601.6	-484.2	-686.3	-779.5	-793.9	-758.6	-805.1	-838.5
Hong Kong	*-9.2*	*-7.4*	*4.7*	*1.4*	*7.7*	*8.8*	*4.7*	*7.6*	*30.7*	*10.9*	*39.5*	*28.6*	*13.5*
PR China	*2.0*	*-1.4*	*-0.4*	*-5.5*	*-16.0*	*-24.3*	*-16.1*	*-25.7*	*-25.7*	*-52.1*	*-88.4*	*-134.3*	*-200.3*
Japan	*-128.4*	*-148.3*	*-163.9*	*-177.7*	*-236.1*	*-256.9*	*-207.8*	*-275.9*	*-304.3*	*-303.3*	*-244.3*	*-246.7*	*-209.9*
South Korea	*-25.1*	*-27.9*	*-35.4*	*-44.5*	*-72.0*	*-90.9*	*-55.9*	*-58.7*	*-67.8*	*-55.3*	*-80.5*	*-75.6*	*-76.3*
Taiwan	*-28.5*	*-35.1*	*-46.2*	*-58.1*	*-73.1*	*-63.2*	*-67.6*	*-109.5*	*-140.3*	*-147.2*	*-156.4*	*-151.6*	*-137.8*
All Other Countries	-31.5	-43.9	-39.8	-55.6	-99.5	-103.2	-84.9	-113.0	-142.4	-192.0	-260.0	-318.5	-233.9
Total	**-1,272.9**	**-1,428.9**	**-1,421.1**	**-1,381.3**	**-2,202.0**	**-2,172.7**	**-2,157.4**	**-2,842.3**	**-2,904.7**	**-2,927.3**	**-2,537.8**	**-3,344.4**	**-3,078.6**

Note: The trade balance is the net of *total* exports minus total imports. Total exports include re-exports, whereas *domestic* exports are shipments of goods produced within Canada only (in the case of tables in this report, within BC only).

Source: BC STATS and Statistics Canada

Detailed Table 23. Domestic Exports of High Technology Goods, by Commodity Group, 1990-2002

Value ($ million)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	0.2	0.7	0.6	1.3	1.4	2.0	0.8	1.0	2.2	2.4	1.5	1.6	1.7
Life Sciences	18.1	19.1	26.9	24.4	23.3	26.1	30.5	46.0	55.3	69.4	82.0	94.8	186.2
Opto-Electronics	7.4	7.2	11.0	16.5	17.7	22.4	24.7	35.6	51.4	91.5	167.5	121.1	70.9
Computers and Telecommunications	101.6	126.4	251.2	317.5	260.8	236.5	292.0	374.3	443.2	399.9	318.6	259.8	262.3
Electronics	4.8	3.0	3.1	6.1	12.7	12.3	17.5	17.1	13.0	9.5	14.2	18.1	4.6
Computer Integrated Manufacturing	6.7	5.7	18.1	25.6	27.7	33.4	32.0	37.4	40.8	44.5	51.6	56.3	47.5
Material Design	3.6	9.5	21.1	24.1	22.6	18.5	0.9	13.7	57.7	94.0	178.6	71.0	3.2
Aerospace	55.2	26.7	22.3	34.3	23.5	53.1	50.6	52.4	101.2	126.6	102.9	118.9	104.5
Weapons and Nuclear	0.7	1.8	0.9	0.6	1.0	2.4	1.5	4.0	4.4	2.3	6.3	6.5	3.9
Total	**198.4**	**200.0**	**355.2**	**450.3**	**390.7**	**406.8**	**450.6**	**581.4**	**769.2**	**840.1**	**923.1**	**748.1**	**684.6**

% change from previous year

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	214.5	-15.7	113.5	8.8	45.8	-60.1	21.6	128.5	8.9	-37.9	5.0	5.7
Life Sciences	5.7	40.9	-9.6	-4.2	11.9	16.7	50.8	20.3	25.5	18.1	15.7	96.3
Opto-Electronics	-2.3	53.5	49.3	7.6	26.2	10.2	44.5	44.4	78.0	82.9	-27.7	-41.5
Computers and Telecommunications	24.4	98.8	26.4	-17.9	-9.3	23.5	28.2	18.4	-9.8	-20.3	-18.5	0.9
Electronics	-38.3	4.2	95.2	108.4	-2.9	42.4	-2.4	-23.8	-26.8	48.5	27.6	-74.7
Computer Integrated Manufacturing	-14.8	217.8	41.1	8.0	20.8	-4.1	16.8	9.1	9.1	15.9	9.2	-15.7
Material Design	160.3	122.6	14.5	-6.4	-18.0	-94.9	1351.2	321.9	63.0	90.0	-60.3	-95.5
Aerospace	-51.7	-16.5	54.1	-31.5	126.1	-4.7	3.5	93.2	25.1	-18.7	15.6	-12.1
Weapons and Nuclear	144.9	-51.1	-33.9	79.5	138.5	-37.6	159.2	10.2	-47.8	178.5	2.0	-40.2
Total	**0.8**	**77.6**	**26.8**	**-13.2**	**4.1**	**10.8**	**29.0**	**32.3**	**9.2**	**9.9**	**-19.0**	**-8.5**

Source: BC STATS and Statistics Canada

Detailed Table 24. Imports of High Technology Goods, by Commodity Group, 1990-2002

Value ($ million)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	9.7	10.2	14.1	16.0	17.4	21.7	24.6	21.6	32.5	33.8	33.7	57.6	52.1
Life Sciences	130.0	124.7	138.0	161.3	228.5	253.6	267.6	276.1	313.9	367.5	448.6	506.7	540.6
Opto-Electronics	19.7	21.7	32.0	31.8	71.3	72.8	78.1	96.3	97.4	93.6	134.1	123.4	104.9
Computers and Telecommunications	748.5	833.8	966.4	1,153.7	1,438.3	1,464.2	1,463.1	1,940.3	2,132.9	2,087.3	2,420.5	2,339.5	2,175.0
Electronics	96.0	112.6	136.2	177.6	397.6	476.7	371.7	545.2	680.0	676.9	547.8	333.7	227.8
Computer Integrated Manufacturing	80.8	77.8	82.2	113.3	168.4	154.5	145.2	183.3	133.8	153.0	186.9	166.1	162.6
Material Design	5.8	7.5	12.7	16.0	29.0	27.8	31.0	33.2	62.5	141.0	132.9	83.1	29.8
Aerospace	360.0	420.4	428.5	232.6	305.7	256.2	427.0	532.7	501.1	672.0	539.6	835.2	766.4
Weapons and Nuclear	20.9	20.0	21.5	27.7	30.8	29.7	34.7	30.2	24.1	24.2	31.2	34.5	28.5
Total	**1,471.3**	**1,628.9**	**1,831.8**	**1,930.0**	**2,687.0**	**2,757.2**	**2,842.9**	**3,658.8**	**3,978.1**	**4,249.3**	**4,475.3**	**4,479.8**	**4,087.7**

% change from previous year

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	5.9	37.8	13.2	8.8	25.0	13.2	-12.3	50.6	4.2	-0.4	71.0	-9.5
Life Sciences	-4.0	10.7	16.8	41.7	11.0	5.5	3.2	13.7	17.1	22.1	12.9	6.7
Opto-Electronics	10.2	47.6	-0.6	124.2	2.0	7.2	23.3	1.2	-3.9	43.2	-8.0	-15.0
Computers and Telecommunications	11.4	15.9	19.4	24.7	1.8	-0.1	32.6	9.9	-2.1	16.0	-3.3	-7.0
Electronics	17.3	21.0	30.3	123.9	19.9	-22.0	46.7	24.7	-0.5	-19.1	-39.1	-31.7
Computer Integrated Manufacturing	-3.7	5.7	37.8	48.7	-8.3	-6.0	26.2	-27.0	14.3	22.1	-11.1	-2.1
Material Design	30.0	69.4	26.0	81.2	-4.0	11.3	7.0	88.5	125.5	-5.7	-37.5	-64.1
Aerospace	16.8	1.9	-45.7	31.4	-16.2	66.7	24.7	-5.9	34.1	-19.7	54.8	-8.2
Weapons and Nuclear	-4.4	7.4	28.8	11.2	-3.7	16.7	-12.9	-20.1	0.3	29.2	10.6	-17.6
Total	**10.7**	**12.5**	**5.4**	**39.2**	**2.6**	**3.1**	**28.7**	**8.7**	**6.8**	**5.3**	**0.1**	**-8.8**

Source: BC STATS and Statistics Canada

Detailed Table 25. Balance of Trade in High Technology Goods, by Commodity Group, 1990-2002

	Balance ($ million)												
	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
Biotechnology	-9.4	-9.5	-13.5	-14.6	-16.0	-19.7	-23.7	-20.6	-30.2	-31.4	-32.2	-56.0	-50.4
Life Sciences	-110.9	-104.7	-108.9	-134.8	-203.0	-225.9	-235.9	-228.6	-256.8	-295.1	-363.5	-409.2	-350.3
Opto-Electronics	-12.1	-14.1	-20.3	-13.9	-51.7	-49.7	-51.6	-58.1	-44.9	-0.5	36.0	1.2	-30.6
Computers and Telecommunications	-622.8	-681.4	-681.7	-763.5	-1,111.2	-1,157.6	-1,087.5	-1,487.2	-1,621.8	-1,621.5	-2,020.5	-2,003.8	-1,834.0
Electronics	-90.4	-107.5	-131.0	-166.4	-372.3	-424.7	-286.3	-413.7	-455.0	-302.6	334.4	-51.6	-37.9
Computer Integrated Manufacturing	-71.8	-70.4	-61.1	-85.6	-138.5	-118.6	-110.5	-143.7	-90.7	-105.4	-127.2	-101.6	-110.4
Material Design	-2.1	2.0	8.4	8.1	-6.4	-9.3	-29.4	-19.5	-4.8	-46.8	46.0	-7.5	-25.0
Aerospace	-292.1	-343.0	-392.4	-183.6	-273.3	-140.3	-299.5	-445.1	-382.5	-503.6	-388.1	-688.4	-616.4
Weapons and Nuclear	-20.1	-18.3	-20.5	-27.0	-29.6	-26.9	-32.9	-25.8	-17.9	-20.4	-22.7	-27.4	-23.7
Total	**-1,231.8**	**-1,346.9**	**-1,421.1**	**-1,381.3**	**-2,202.0**	**-2,172.7**	**-2,157.4**	**-2,842.3**	**-2,904.7**	**-2,927.3**	**-2,537.8**	**-3,344.4**	**-3,078.6**

Note: The trade balance is the net of *total* exports minus total imports. Total exports include re-exports, whereas *domestic* exports are shipments of goods produced within Canada only (in the case of tables in this report, within BC only).

Source: BC STATS and Statistics Canada

Detailed Table 26. Domestic Exports of High Technology Goods to the United States, by Commodity Group, 1990-2002

Value ($ million)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	0.2	0.6	0.5	0.7	0.8	0.4	0.6	0.6	0.7	0.7	0.6	1.5	1.6
Life Sciences	8.9	11.0	16.3	14.7	17.1	16.8	23.6	40.0	45.4	59.6	71.5	85.8	167.6
Opto-Electronics	3.0	4.1	6.3	8.5	12.3	16.1	16.3	24.7	40.5	77.5	135.3	89.8	54.2
Computers and Telecommunications	61.7	82.0	186.9	235.0	173.1	151.0	173.1	244.7	314.8	285.0	250.9	206.7	219.0
Electronics	4.6	2.6	2.9	4.7	5.0	9.1	8.7	10.3	7.5	6.7	9.9	14.4	2.3
Computer Integrated Manufacturing	4.0	4.9	9.3	15.7	20.5	26.2	25.6	29.6	32.2	35.7	40.9	49.5	39.0
Material Design	3.5	7.2	20.9	23.6	21.7	18.2	0.8	13.7	57.3	93.9	178.3	50.3	3.1
Aerospace	25.9	20.4	19.5	23.3	19.5	47.8	39.4	47.3	94.2	120.2	83.9	92.5	70.0
Weapons and Nuclear	0.3	1.0	0.2	0.1	0.4	0.8	0.6	3.5	4.0	0.8	1.7	6.0	1.3
Total	**112.2**	**133.8**	**262.7**	**326.3**	**270.6**	**286.4**	**288.7**	**414.4**	**596.6**	**680.0**	**773.0**	**596.4**	**558.1**

% change from previous year

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	212.3	-10.6	35.8	9.0	-54.5	70.4	-0.5	10.5	2.3	-9.6	135.6	7.8
Life Sciences	23.6	48.2	-9.4	15.9	-1.8	41.0	69.4	13.4	31.4	20.0	19.9	95.5
Opto-Electronics	37.9	53.6	33.6	45.6	30.8	1.2	51.3	64.0	91.2	74.6	-33.6	-39.7
Computers and Telecommunications	32.9	127.9	25.8	-26.3	-12.8	14.6	41.4	28.6	-9.5	-12.0	-17.6	6.0
Electronics	-44.6	11.9	61.6	8.0	80.4	-3.9	18.2	-27.5	-10.4	48.4	45.3	-84.1
Computer Integrated Manufacturing	21.5	90.9	68.4	30.7	27.6	-2.5	15.7	8.8	10.8	14.6	21.1	-21.2
Material Design	106.4	189.9	12.9	-7.7	-16.2	-95.8	1,666.4	319.3	63.9	89.9	-71.8	-93.8
Aerospace	-21.1	-4.6	19.7	-16.2	144.8	-17.6	20.1	99.1	27.6	-30.2	10.3	-24.4
Weapons and Nuclear	202.6	-84.9	-32.0	304.3	87.1	-21.4	451.1	16.5	-79.7	101.3	261.3	-78.5
Total	**19.3**	**96.3**	**24.2**	**-17.1**	**5.8**	**0.8**	**43.5**	**44.0**	**14.0**	**13.7**	**-22.8**	**-6.4**

Source: BC STATS and Statistics Canada

Detailed Table 27. Imports of High Technology Goods from the United States, by Commodity Group, 1990-2002

Value ($ million)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	7.3	7.8	10.2	10.6	11.0	12.5	12.3	11.2	17.2	21.6	16.2	21.8	22.0
Life Sciences	82.4	77.9	87.4	103.9	154.9	164.2	167.8	160.4	190.5	225.5	275.9	300.0	321.6
Opto-Electronics	6.0	5.8	9.4	10.3	31.2	34.1	37.8	50.2	50.7	47.6	59.4	51.6	39.4
Computers and Telecommunications	489.3	526.3	610.9	716.3	875.0	896.1	921.1	1,220.0	1,351.5	1,195.4	1,305.8	1,173.4	994.6
Electronics	54.6	54.8	65.9	79.6	156.7	189.4	169.2	253.3	312.2	298.8	238.7	155.4	114.0
Computer Integrated Manufacturing	55.6	56.3	58.3	81.4	127.0	107.5	101.0	139.6	99.6	115.2	137.3	119.4	113.9
Material Design	5.3	5.8	11.0	14.0	26.4	23.3	27.3	29.5	56.8	125.9	104.1	51.2	22.7
Aerospace	250.5	267.9	265.4	160.0	223.1	183.1	284.9	220.2	225.4	260.2	229.2	338.8	275.1
Weapons and Nuclear	13.8	15.9	15.8	22.0	20.5	17.2	18.5	19.1	15.3	15.3	19.2	21.4	18.3
Total	**964.8**	**1,018.4**	**1,134.2**	**1,198.0**	**1,625.8**	**1,627.4**	**1,740.0**	**2,103.6**	**2,319.2**	**2,305.6**	**2,385.9**	**2,233.0**	**1,921.7**

% change from previous year

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	6.3	30.0	4.3	3.6	13.7	-1.1	-8.9	53.3	25.5	-25.1	34.6	1.0
Life Sciences	-5.5	12.3	18.8	49.1	6.0	2.2	-4.4	18.7	18.4	22.4	8.7	7.2
Opto-Electronics	-2.9	62.0	9.4	203.3	9.2	10.9	32.6	1.1	-6.0	24.7	-13.1	-23.7
Computers and Telecommunications	7.6	16.1	17.3	22.2	2.4	2.8	32.5	10.8	-11.5	9.2	-10.1	-15.2
Electronics	0.3	20.3	20.7	97.0	20.8	-10.6	49.7	23.3	-4.3	-20.1	-34.9	-26.6
Computer Integrated Manufacturing	1.2	3.7	39.6	56.0	-15.3	-6.0	38.2	-28.7	15.7	19.2	-13.1	-4.6
Material Design	9.4	90.7	27.6	88.6	-12.0	17.3	8.1	92.5	121.7	-17.3	-50.9	-55.7
Aerospace	6.9	-0.9	-39.7	39.4	-17.9	55.5	-22.7	2.3	15.4	-11.9	47.8	-18.8
Weapons and Nuclear	15.2	-0.7	39.3	-6.9	-15.8	7.6	3.1	-20.0	0.0	25.8	11.2	-14.3
Total	**5.6**	**11.4**	**5.6**	**35.7**	**0.1**	**6.9**	**20.9**	**10.3**	**-0.6**	**3.5**	**-6.4**	**-13.9**

Source: BC STATS and Statistics Canada

Detailed Table 28. Balance of Trade in High Tech. Goods with the United States, by Commodity Group, 1990-2002

	Balance ($ million)												
	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
Biotechnology	-7.2	-7.2	-9.6	-9.2	-10.2	-12.1	-11.7	-10.6	-16.6	-20.9	-15.6	-20.3	-20.4
Life Sciences	-72.7	-66.1	-69.0	-77.3	-136.3	-146.0	-143.2	-119.4	-143.6	-163.1	-201.5	-212.0	-150.8
Opto-Electronics	-2.8	-1.4	-2.5	7.7	-17.1	-17.5	-20.3	-23.6	-9.2	31.3	78.3	41.3	16.9
Computers and Telecommunications	-406.5	-422.3	-395.3	-326.1	-653.7	-681.0	-675.7	-910.9	-978.8	-856.0	-987.7	-900.8	-706.8
Electronics	-49.4	-51.7	-61.2	-68.4	-140.3	-147.8	-106.9	-150.2	-128.2	9.8	456.5	33.4	14.1
Computer integrated Manufacturing	-50.1	-50.5	-47.5	-53.7	-104.3	-78.9	-73.0	-107.9	-65.1	-76.6	-88.4	-62.0	-70.6
Material Design	-1.8	1.4	9.9	10.1	-4.7	-5.1	-25.9	-15.8	0.6	-31.8	74.5	1.6	-17.9
Aerospace	-215.7	-201.1	-233.7	-111.0	-197.4	-84.3	-173.1	-143.7	-117.7	-107.6	-114.2	-231.1	-176.3
Weapons and Nuclear	-13.4	-14.9	-15.6	-21.3	-20.0	-16.3	-17.8	-15.3	-9.5	-13.3	-15.9	-14.8	-16.2
Total	-	-	-	-	-	-	-	-	-	-	-	-	-
	-819.5	**-813.7**	**-824.6**	**-649.4**	**1,284.0**	**1,189.0**	**1,247.6**	**1,497.3**	**1,468.1**	**1,228.2**	**-814.0**	**1,364.8**	**1,128.0**

Note: The trade balance is the net of *total* exports minus total imports. Total exports include re-exports, whereas *domestic* exports are shipments of goods produced within Canada only (in the case of tables in this report, within BC only).

Source: BC STATS and Statistics Canada

Detailed Table 29. Domestic Exports of High Technology Goods to the Pacific Rim, by Commodity Group, 1990-2002

Values ($ million)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.3	0.0	0.0
Life Sciences	6.4	4.8	7.8	6.6	4.2	6.5	3.7	2.8	2.6	3.5	4.0	2.8	1.9
Opto-Electronics	1.4	1.2	2.9	2.5	2.1	1.8	2.3	1.6	1.3	2.3	11.9	4.3	11.0
Computers and Telecommunications	15.3	22.2	35.4	54.3	49.4	55.2	88.5	98.7	80.4	68.7	37.8	18.4	14.5
Electronics	0.1	0.4	0.2	0.3	3.9	1.9	4.9	4.4	3.8	2.1	3.2	2.6	1.7
Computer Integrated Manufacturing	1.5	0.3	0.6	1.7	3.8	4.8	3.5	4.6	5.8	5.3	5.3	3.4	3.4
Material Design	0.1	2.3	0.2	0.5	0.6	0.3	0.1	0.0	0.1	0.0	0.0	0.2	0.0
Aerospace	5.3	0.5	1.2	1.9	1.7	1.3	2.3	2.3	2.1	1.5	2.2	1.6	13.1
Weapons and Nuclear	0.2	0.3	0.6	0.2	0.2	0.3	0.6	0.4	0.1	0.4	2.0	0.1	1.7
Total	**30.2**	**31.9**	**48.9**	**68.1**	**65.9**	**72.1**	**106.2**	**114.6**	**96.1**	**83.8**	**66.8**	**33.3**	**47.2**

% change from previous year

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	1.0	154.5	100.5	15.4	-40.8	165.8	-100.0	-	42.5	1,624.6	-91.7	-77.4
Life Sciences	-25.4	62.8	-14.7	-36.8	55.0	-42.3	-26.0	-5.0	33.7	15.2	-30.3	-33.0
Opto-Electronics	-12.3	138.6	-14.1	-14.8	-12.8	27.0	-33.1	-16.0	75.7	418.2	-64.2	157.3
Computers and Telecommunications	45.6	59.3	53.4	-9.1	11.8	60.2	11.6	-18.6	-14.4	-45.0	-51.3	-21.3
Electronics	206.3	-45.8	32.7	1,386.8	-51.8	162.4	-10.5	-13.6	-45.7	54.5	-20.1	-35.2
Computer Integrated Manufacturing	-81.6	120.7	178.2	127.5	26.3	-27.2	30.5	26.7	-8.4	0.0	-35.2	-1.6
Material Design	1,649.9	-92.1	207.1	10.9	-57.3	-50.7	-96.7	2,707.5	-100.0	-	830.4	-96.5
Aerospace	-91.2	171.0	55.8	-12.6	-23.5	77.6	-0.3	-10.0	-28.5	49.8	-26.3	699.1
Weapons and Nuclear	76.0	86.1	-73.3	29.6	27.4	150.1	-43.6	-82.8	563.3	390.5	-96.6	2424.9
Total	**5.5**	**53.4**	**39.2**	**-3.1**	**9.3**	**47.3**	**8.0**	**-16.1**	**-12.8**	**-20.3**	**-50.1**	**41.5**

Source: BC STATS and Statistics Canada

Detailed Table 30. Imports of High Technology Goods from the Pacific Rim, by Commodity Group, 1990-2002

Values ($ million)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	0.5	0.4	0.4	0.9	0.6	0.4	0.5	0.3	1.3	2.2	3.0	2.0	1.4
Life Sciences	9.9	9.3	10.0	10.1	18.3	20.6	23.4	19.3	18.8	25.8	28.0	35.7	34.9
Opto-Electronics	11.8	14.5	20.4	19.1	35.8	34.6	34.5	41.2	41.4	40.1	62.9	59.0	51.7
Computers and Telecommunications	190.0	233.3	275.4	332.2	415.1	420.2	389.6	532.1	573.1	589.8	614.8	642.0	736.0
Electronics	17.5	21.8	26.8	48.8	130.7	183.8	130.5	206.7	243.2	231.9	211.8	122.6	81.9
Computer Integrated Manufacturing	11.1	9.7	10.6	16.4	19.0	24.3	20.7	22.1	18.5	20.9	25.6	20.1	20.2
Material Design	0.2	0.4	1.0	1.3	1.6	2.5	1.6	1.4	1.9	8.7	12.4	13.6	2.2
Aerospace	3.6	3.8	2.4	2.8	3.3	3.0	5.6	6.1	14.4	16.0	17.1	17.9	12.7
Weapons and Nuclear	1.1	0.9	1.0	1.0	1.2	1.3	1.6	1.6	1.4	1.5	1.7	2.2	2.1
Total	**245.8**	**294.0**	**348.2**	**432.6**	**625.5**	**690.7**	**608.0**	**830.8**	**913.9**	**936.7**	**977.3**	**915.1**	**943.0**

% change from previous year

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	-20.6	-4.2	126.2	-31.2	-39.6	36.2	-33.0	308.8	63.2	39.6	-34.8	-30.1
Life Sciences	-6.2	7.7	1.3	80.6	12.7	13.6	-17.9	-2.4	37.1	8.7	27.7	-2.4
Opto-Electronics	22.5	41.3	-6.3	87.0	-3.2	-0.4	19.3	0.5	-3.2	56.9	-6.2	-12.3
Computers and Telecommunications	22.8	18.1	20.6	24.9	1.2	-7.3	36.6	7.7	2.9	4.2	4.4	14.6
Electronics	24.5	23.1	81.9	167.7	40.6	-29.0	58.4	17.6	-4.6	-8.7	-42.1	-33.2
Computer Integrated Manufacturing	-13.2	9.9	53.9	16.3	27.7	-14.9	6.7	-16.2	12.8	22.3	-21.3	0.4
Material Design	95.6	147.7	19.9	23.7	58.6	-33.8	-15.6	39.8	350.8	42.9	9.7	-84.1
Aerospace	5.9	-36.5	15.9	17.0	-8.7	88.6	9.6	133.7	11.3	6.9	4.8	-29.1
Weapons and Nuclear	-21.1	15.2	4.8	16.1	8.5	21.8	-0.2	-12.9	4.7	18.0	25.9	-2.6
Total	**19.6**	**18.4**	**24.2**	**44.6**	**10.4**	**-12.0**	**36.6**	**10.0**	**2.5**	**4.3**	**-6.4**	**3.0**

Source: BC STATS and Statistics Canada

Detailed Table 31. Balance of Trade in High Technology Goods with the Pacific Rim, by Commodity Group, 1990-2002

	Balance ($ million)												
	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
Biotechnology	-0.5	-0.4	-0.3	-0.8	-0.5	-0.3	-0.3	-0.3	-1.3	-2.2	-2.7	-2.0	-1.4
Life Sciences	-3.4	-4.5	-2.2	-3.5	-13.8	-14.1	-19.6	-16.1	-16.1	-22.1	-23.8	-32.7	-32.6
Opto-Electronics	-10.4	-13.2	-17.5	-16.2	-33.6	-32.5	-31.8	-39.3	-40.0	-37.7	-50.9	-54.6	-40.6
Computers and Telecommunications	-173.1	-208.5	-236.9	-264.4	-350.7	-362.0	-292.9	-422.3	-485.2	-514.0	-574.2	-620.1	-718.1
Electronics	-17.2	-19.9	-26.4	-48.2	-126.3	-177.6	-118.4	-187.4	-210.5	-181.0	-63.5	-51.2	-29.2
Computer Integrated Manufacturing	-9.2	-9.1	-9.4	-14.7	-15.2	-19.5	-17.1	-17.5	-12.7	-15.6	-20.2	-16.6	-16.7
Material Design	-0.1	1.8	-0.9	-0.7	-0.9	-2.2	-1.5	-1.4	-1.8	-8.7	-12.4	-11.4	-2.1
Aerospace	3.0	-2.3	-0.9	-0.1	-1.3	7.6	-1.6	-0.7	-10.6	-11.7	-11.4	-14.4	2.4
Weapons and Nuclear	-0.9	-0.6	-0.3	-0.8	-1.0	-1.0	-0.9	-1.2	-1.3	-0.9	0.5	-2.1	-0.3
Total	**-211.8**	**-256.6**	**-294.9**	**-349.4**	**-543.2**	**-601.6**	**-484.2**	**-686.3**	**-779.5**	**-793.9**	**-758.6**	**-805.1**	**-838.5**

Note: The trade balance is the net of *total* exports minus total imports. Total exports include re-exports, whereas *domestic* exports are shipments of goods produced within Canada only (in the case of tables in this report, within BC only).

Source: BC STATS and Statistics Canada

Detailed Table 32. Domestic Exports of High Technology Goods to Japan, by Commodity Group, 1990-2002

Values ($ million)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Life Sciences	5.6	3.5	5.1	3.1	2.1	3.9	1.7	1.2	0.9	1.5	2.3	0.6	0.5
Opto-Electronics	0.4	0.3	0.7	0.6	0.7	0.5	0.5	0.2	0.2	0.6	8.8	1.2	9.3
Computers and Telecommunications	3.1	4.6	4.3	5.6	6.9	8.0	13.5	15.2	5.5	1.9	16.5	6.2	2.6
Electronics	0.0	0.0	0.0	0.0	0.6	0.9	1.3	1.5	1.0	0.2	0.4	1.4	1.0
Computer Integrated Manufacturing	0.3	0.1	0.2	0.2	0.0	0.3	1.3	0.6	0.0	0.2	0.0	0.1	0.1
Material Design	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Aerospace	0.1	0.0	0.2	0.1	0.5	0.0	0.0	0.3	0.9	0.7	0.4	0.2	8.6
Weapons and Nuclear	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.1	1.9	0.0	0.0
Total	**9.8**	**8.6**	**10.6**	**9.6**	**10.8**	**13.6**	**18.7**	**19.3**	**8.6**	**5.2**	**30.4**	**9.7**	**22.0**

% change from previous year

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	-100.0	-	-	-	-	588.7	-100.0	-	-100.0	-	-100.0	-
Life Sciences	-38.1	46.6	-40.1	-30.1	81.6	-57.3	-30.0	-23.8	66.5	53.1	-75.7	-10.5
Opto-Electronics	-35.5	131.0	-11.2	17.0	-31.6	12.0	-56.3	-26.1	260.2	1,343.6	-86.0	653.0
Computers and Telecommunications	48.9	-7.7	29.6	24.8	16.0	68.1	12.2	-63.6	-66.2	784.3	-62.6	-58.1
Electronics	-71.1	-81.0	2,063.1	1307.4	49.5	53.4	14.2	-34.0	-84.6	173.8	225.9	-31.2
Computer Integrated Manufacturing	-69.6	75.1	38.5	-93.2	1,429.0	435.3	-52.3	-93.9	428.7	-99.7	9,357.1	10.6
Material Design	105.4	1,489.4	-100.0	-	-	-100.0	-	-	-100.0	-	-	-100.0
Aerospace	-71.6	636.5	-59.8	571.2	-92.4	-89.8	8,435.7	199.2	-17.6	-50.0	-41.1	3770.8
Weapons and Nuclear	-67.8	-14.8	-41.8	47.7	89.2	790.8	-21.1	-95.3	1,039.2	1247.7	-99.6	574.4
Total	**-11.9**	**23.5**	**-9.8**	**13.3**	**25.5**	**37.6**	**2.9**	**-55.4**	**-39.5**	**483.0**	**-68.0**	**127.1**

Source: BC STATS and Statistics Canada

Detailed Table 33. Imports of High Technology Goods from Japan, by Commodity Group, 1990-2002

Values ($ million)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	0.4	0.4	0.3	0.8	0.5	0.2	0.4	0.1	0.1	0.2	0.6	0.3	0.4
Life Sciences	7.2	6.2	6.1	6.7	11.0	11.4	10.7	10.1	11.3	14.3	14.6	17.3	17.3
Opto-Electronics	9.0	10.4	15.4	13.0	24.3	20.7	16.2	18.0	16.3	16.6	23.0	20.5	17.3
Computers and Telecommunications	103.4	119.3	132.0	136.8	139.9	149.8	144.4	198.8	204.5	192.6	178.7	164.3	167.1
Electronics	6.1	10.1	10.6	16.8	53.2	74.3	39.0	51.6	58.1	57.6	54.6	30.8	18.3
Computer Integrated Manufacturing	9.7	8.5	9.4	15.1	16.8	21.0	16.8	18.9	14.9	17.5	20.5	15.0	13.9
Material Design	0.2	0.3	0.8	0.9	1.2	2.1	1.3	1.3	1.5	7.0	7.9	7.5	1.2
Aerospace	1.6	1.2	0.9	0.6	0.5	0.6	3.0	4.0	12.4	14.3	15.3	15.4	10.6
Weapons and Nuclear	0.7	0.6	0.6	0.6	0.7	0.8	0.8	0.9	0.5	0.5	0.8	1.0	0.8
Total	**138.2**	**156.9**	**176.3**	**191.1**	**248.0**	**281.0**	**232.5**	**303.7**	**319.6**	**320.5**	**316.1**	**272.0**	**246.8**

% change from previous year

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	-18.0	-8.0	133.3	-32.5	-62.4	80.1	-62.3	-43.8	235.6	123.0	-54.8	45.0
Life Sciences	-14.4	-0.3	9.3	63.8	4.1	-6.4	-5.2	11.9	26.0	2.5	18.0	-0.1
Opto-Electronics	16.2	48.1	-16.0	87.1	-14.6	-21.9	11.1	-9.1	1.4	38.9	-11.1	-15.6
Computers and Telecommunications	15.4	10.7	3.6	2.2	7.1	-3.6	37.7	2.8	-5.8	-7.2	-8.1	1.7
Electronics	64.1	5.5	58.1	217.0	39.7	-47.5	32.3	12.7	-1.0	-5.1	-43.6	-40.8
Computer Integrated Manufacturing	-12.0	10.1	60.3	11.3	25.1	-19.8	12.5	-21.3	17.3	17.5	-27.0	-7.0
Material Design	74.1	175.1	12.6	38.5	73.4	-40.0	-0.5	15.2	380.4	12.1	-5.2	-83.6
Aerospace	-26.1	-22.1	-35.0	-11.8	18.8	393.5	32.5	209.7	15.5	7.0	0.3	-31.0
Weapons and Nuclear	-4.8	2.6	-11.3	27.6	8.4	-1.2	13.9	-41.6	-9.0	63.8	34.6	-23.7
Total	**13.6**	**12.3**	**8.4**	**29.8**	**13.3**	**-17.2**	**30.6**	**5.2**	**0.3**	**-1.4**	**-14.0**	**-9.3**

Source: BC STATS and Statistics Canada

Detailed Table 34. Balance of Trade in High Technology Goods with Japan, by Commodity Group, 1990-2002

	Balance ($ million)												
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	-7.2	-6.2	-6.1	-6.7	-11.0	-11.4	-10.7	-10.1	-11.3	-14.3	-14.6	-17.3	-17.3
Life Sciences	-3.2	-6.9	-10.3	-9.9	-21.9	-16.8	-14.5	-16.8	-15.4	-15.0	-20.6	-19.9	-16.6
Opto-Electronics	-102.9	-119.0	-131.3	-135.9	-139.1	-149.2	-143.6	-198.4	-204.3	-192.0	-169.9	-163.1	-157.6
Computers and Telecommunications	-2.7	-4.5	-4.7	-7.9	-45.8	-66.0	-21.8	-31.4	-52.4	-55.5	-38.0	-23.9	-15.3
Electronics	-9.6	-8.5	-9.4	-15.0	-16.1	-19.1	-13.9	-14.4	-8.4	-5.9	20.8	1.1	1.1
Computer Integrated Manufacturing	0.2	-0.2	-0.6	-0.6	-1.2	-1.9	0.1	-0.6	-1.4	-6.8	-7.9	-7.4	-1.2
Material Design	-1.6	-1.1	-0.7	-0.6	-0.5	-0.6	-3.0	-4.0	-12.3	-14.3	-15.3	-15.3	-10.6
Aerospace	-0.5	-0.2	-0.4	-0.3	-0.1	8.3	-0.4	-0.2	1.4	0.6	-0.1	-0.6	7.8
Weapons and Nuclear	-0.6	-0.6	-0.6	-0.5	-0.7	-0.7	-0.4	-0.6	-0.5	-0.3	1.2	-1.0	-0.7
Total	**-127.8**	**-147.0**	**-163.9**	**-177.7**	**-236.1**	**-256.9**	**-207.8**	**-275.9**	**-304.3**	**-303.3**	**-244.3**	**-246.7**	**-209.9**

Note: The trade balance is the net of *total* exports minus total imports. Total exports include re-exports, whereas *domestic* exports are shipments of goods produced within Canada only (in the case of tables in this report, within BC only).

Source: BC STATS and Statistics Canada

Detailed Table 35. Domestic Exports of High Technology Goods to the Pacific Rim (excluding Japan), 1990-2002

Value ($ million)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Life Sciences	0.7	1.3	2.6	3.5	2.0	2.6	2.1	1.6	1.7	2.0	1.8	2.3	1.4
Opto-Electronics	0.9	0.9	2.2	1.9	1.4	1.4	1.8	1.3	1.1	1.7	3.1	3.0	1.6
Computers and Telecommunications	12.1	17.6	31.1	48.7	42.4	47.2	74.9	83.5	74.8	66.9	21.3	12.2	11.9
Electronics	0.1	0.4	0.2	0.2	3.3	1.0	3.6	2.9	2.8	1.9	2.8	1.2	0.7
Computer Integrated Manufacturing	1.2	0.2	0.4	1.4	3.8	4.5	2.2	3.9	5.7	5.1	5.3	3.4	3.3
Material Design	0.1	2.2	0.0	0.5	0.6	0.3	0.1	0.0	0.1	0.0	0.0	0.1	0.0
Aerospace	5.2	0.4	1.1	1.9	1.2	1.3	2.3	2.0	1.2	0.7	1.8	1.4	4.5
Weapons and Nuclear	0.1	0.3	0.6	0.1	0.2	0.2	0.3	0.1	0.1	0.3	0.2	0.1	1.7
Total	**20.4**	**23.3**	**38.3**	**58.5**	**55.1**	**58.5**	**87.4**	**95.3**	**87.5**	**78.6**	**36.4**	**23.6**	**25.1**

% change from previous year

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	654.2	154.5	100.5	15.4	-43.7	143.9	-100.0	-	-	1097.8	-88.1	-77.4
Life Sciences	71.9	107.4	34.5	-42.6	27.0	-19.7	-22.7	8.6	16.9	-12.3	27.2	-38.4
Opto-Electronics	-1.3	141.0	-15.0	-24.8	-3.6	32.2	-26.4	-14.2	48.2	82.9	-2.1	-45.8
Computers and Telecommunications	44.7	77.0	56.7	-13.0	11.2	58.9	11.5	-10.4	-10.6	-68.2	-42.5	-2.7
Electronics	322.3	-44.8	12.7	1401.8	-69.7	257.5	-19.8	-2.7	-31.6	44.7	-58.0	-40.1
Computer Integrated Manufacturing	-85.0	146.9	235.0	164.6	20.2	-52.6	82.0	46.3	-11.4	4.1	-36.3	-1.8
Material Design	1,717.3	-99.9	21,685.9	10.9	-57.7	-50.2	-96.7	1,571.8	-100.0	-	463.9	-94.3
Aerospace	-91.5	146.2	74.3	-34.1	2.4	82.2	-13.4	-41.9	-37.1	152.2	-23.3	219.0
Weapons and Nuclear	198.2	95.4	-74.6	28.0	20.8	43.9	-66.7	-52.2	449.4	-34.9	-65.6	2640.2
Total	**13.9**	**64.4**	**52.9**	**-5.8**	**6.1**	**49.6**	**9.0**	**-8.2**	**-10.2**	**-53.7**	**-35.1**	**6.4**

Source: BC STATS and Statistics Canada

Detailed Table 36. Imports of High Technology Goods from the Pacific Rim (excluding Japan), by Commodity Group, 1990-2002

Values ($ million)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	-6.7	-5.8	-5.8	-5.8	-10.4	-11.1	0.1	0.2	1.3	1.9	2.5	1.7	1.0
Life Sciences	9.5	8.9	9.7	9.4	17.8	20.4	12.8	9.1	7.4	11.5	13.3	18.4	17.6
Opto-Electronics	2.8	4.0	5.0	6.2	11.5	13.9	18.3	23.2	25.0	23.5	39.9	38.5	34.4
Computers and Telecommunications	86.7	114.0	143.4	195.4	275.2	270.4	245.1	333.3	368.6	397.2	436.0	477.7	568.9
Electronics	11.4	11.7	16.2	32.0	77.5	109.4	91.5	155.1	185.0	174.4	157.2	91.8	63.6
Computer Integrated Manufacturing	1.5	1.1	1.2	1.3	2.3	3.4	3.9	3.2	3.6	3.4	5.1	5.1	6.3
Material Design	0.1	0.1	0.3	0.4	0.3	0.3	0.4	0.1	0.5	1.6	4.5	6.1	0.9
Aerospace	2.0	2.6	1.5	2.2	2.7	2.4	2.6	2.1	2.0	1.7	1.8	2.5	2.1
Weapons and Nuclear	0.4	0.2	0.4	0.5	0.5	0.5	0.8	0.7	0.9	1.0	1.0	1.1	1.3
Total	**107.6**	**137.1**	**171.9**	**241.5**	**377.5**	**409.7**	**375.5**	**527.0**	**594.3**	**616.2**	**661.2**	**643.1**	**696.2**

% change from previous year

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	-14.0	0.0	1.6	77.7	6.5	-101.2	42.9	549.6	53.0	28.8	-30.3	-41.0
Life Sciences	-5.6	8.3	-3.2	89.8	14.9	-37.6	-28.5	-18.3	54.1	16.3	38.2	-4.4
Opto-Electronics	42.7	23.6	23.8	86.6	21.0	31.6	26.6	8.0	-6.2	69.7	-3.4	-10.6
Computers and Telecommunications	31.5	25.8	36.2	40.8	-1.8	-9.3	35.9	10.6	7.8	9.8	9.6	19.1
Electronics	3.1	38.2	97.5	141.8	41.2	-16.4	69.6	19.3	-5.8	-9.8	-41.6	-30.7
Computer Integrated Manufacturing	-21.0	8.8	5.9	73.2	46.7	15.9	-18.0	13.9	-5.4	46.7	1.6	21.8
Material Design	163.7	90.6	41.8	-11.9	3.3	5.5	-69.8	330.3	257.2	174.0	35.6	-84.6
Aerospace	30.9	-42.8	46.5	24.7	-13.9	9.5	-17.2	-8.4	-15.3	6.0	43.8	-16.9
Weapons and Nuclear	-45.5	48.1	33.8	2.3	8.7	56.2	-13.5	22.8	12.7	-3.8	18.8	17.0
Total	**27.4**	**25.4**	**40.5**	**56.3**	**8.5**	**-8.3**	**40.4**	**12.8**	**3.7**	**7.3**	**-2.7**	**8.3**

Source: BC STATS and Statistics Canada

Detailed Table 37. Balance of Trade in High Technology Goods with the Pacific Rim (excluding Japan), by Commodity Group, 1990-2002

	Balance ($ million)												
	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
Biotechnology	6.7	5.8	5.8	5.9	10.5	11.1	0.0	-0.2	-1.3	-1.9	-2.3	-1.7	-1.0
Life Sciences	-8.7	-7.6	-7.0	-5.8	-15.7	-17.8	-10.7	-7.1	-5.6	-9.4	-11.5	-16.0	-16.1
Opto-Electronics	-1.9	-3.1	-2.8	-4.1	-10.1	-12.4	-16.4	-21.8	-23.9	-21.8	-36.8	-35.4	-32.8
Computers and Telecommunications	-73.1	-94.7	-110.8	-136.6	-218.3	-220.5	-165.6	-243.6	-286.5	-323.5	-412.0	-462.7	-554.0
Electronics	-11.2	-9.9	-15.8	-31.4	-73.8	-105.2	-82.3	-140.3	-158.9	-135.0	-50.1	-36.4	-25.9
Computer Integrated Manufacturing	0.1	-0.6	-0.2	0.1	1.6	1.2	-1.7	0.7	2.1	1.7	0.3	-1.7	-2.8
Material Design	0.1	2.1	-0.3	0.2	0.3	-0.1	-0.2	-0.1	-0.4	-1.6	-4.5	-4.0	-0.9
Aerospace	4.4	-1.5	-0.2	0.3	-1.4	-0.8	1.1	2.6	0.0	1.7	3.4	0.6	4.5
Weapons and Nuclear	-0.3	0.0	0.3	-0.3	-0.3	-0.3	-0.5	-0.6	-0.8	-0.7	-0.8	-1.1	0.4
Total	**-84.0**	**-109.5**	**-131.0**	**-171.7**	**-307.1**	**-344.7**	**-276.3**	**-410.3**	**-475.2**	**-490.5**	**-514.4**	**-558.4**	**-628.7**

Note: The trade balance is the net of *total* exports minus total imports. Total exports include re-exports, whereas *domestic* exports are shipments of goods produced within Canada only (in the case of tables in this report, within BC only).

Source: BC STATS and Statistics Canada

Detailed Table 38. Domestic Exports of High Tech. Goods to the European Union, by Commodity Group, 1990-2002

Values ($ million)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	0.0	0.0	0.0	0.1	0.1	1.0	0.0	0.1	0.3	0.1	0.0	0.0	0.1
Life Sciences	2.3	2.1	2.1	1.9	1.6	2.1	1.8	1.9	4.3	4.8	4.0	3.9	11.6
Opto-Electronics	1.6	1.2	1.0	2.5	2.1	3.2	2.0	5.4	7.0	8.4	17.3	24.4	3.3
Computers and Telecommunications	11.7	10.8	12.3	14.9	23.1	20.0	19.8	21.2	39.8	33.4	19.9	27.3	20.4
Electronics	0.1	0.0	0.0	0.3	1.7	1.2	0.4	1.1	1.2	0.7	0.8	1.1	0.4
Computer Integrated Manufacturing	0.5	0.3	0.4	0.4	0.9	0.9	0.8	0.9	0.6	1.0	1.1	0.8	1.0
Material Design	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.2	4.6	0.0
Aerospace	22.8	1.9	1.1	7.6	1.1	2.8	2.4	1.3	3.1	3.6	13.6	22.5	10.4
Weapons and Nuclear	0.1	0.1	0.1	0.3	0.1	0.9	0.2	0.0	0.3	1.0	2.5	0.3	0.8
Total	**39.0**	**16.4**	**17.1**	**27.9**	**30.7**	**32.1**	**27.4**	**31.9**	**56.4**	**52.9**	**59.3**	**84.8**	**48.1**

% change from previous year

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	166.2	-60.0	311.0	20.3	1,005.0	-98.4	312.2	331.1	-76.7	-100.0	-	562.7
Life Sciences	-9.2	2.5	-9.4	-17.2	33.4	-17.8	9.0	123.2	11.9	-17.0	-1.6	199.0
Opto-Electronics	-27.7	-15.4	146.1	-15.2	53.4	-35.9	161.8	31.4	19.6	105.3	41.3	-86.4
Computers and Telecommunications	-7.4	14.1	21.0	54.8	-13.3	-1.2	7.1	87.7	-16.0	-40.5	37.2	-25.3
Electronics	-57.4	-26.7	1,560.1	508.4	-32.2	-66.4	175.3	7.5	-40.6	12.4	39.7	-63.6
Computer Integrated Manufacturing	-41.7	44.5	-1.1	118.4	-1.1	-6.7	14.1	-36.3	72.9	3.0	-23.6	26.8
Material Design	-83.2	306.8	-23.1	2,084.4	-100.0	-	-100.0	-	-	1,364.7	1,746.2	-99.6
Aerospace	-91.6	-43.5	606.2	-85.7	157.2	-15.3	-43.7	131.0	17.1	278.4	64.8	-53.7
Weapons and Nuclear	80.2	-40.4	228.9	-80.7	1,627.4	-73.2	-91.8	1,165.9	276.9	164.2	-86.4	136.8
Total	**-57.8**	**3.7**	**63.7**	**10.1**	**4.4**	**-14.6**	**16.2**	**77.1**	**-6.2**	**12.1**	**43.0**	**-43.3**

Source: BC STATS and Statistics Canada

Detailed Table 39. Imports of High Technology Goods from the European Union, 1990-2002

Values ($ million)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	1.4	1.4	2.6	3.0	3.9	4.7	5.6	8.0	12.1	8.2	10.1	28.9	23.1
Life Sciences	31.9	31.4	35.2	41.3	46.3	54.3	60.8	75.7	82.5	94.2	116.7	132.4	142.4
Opto-Electronics	1.3	0.9	1.5	1.5	2.7	2.5	3.3	3.4	3.1	3.6	5.8	5.3	6.2
Computers and Telecommunications	41.2	47.1	52.6	56.0	70.3	65.9	50.4	67.8	82.7	111.2	184.7	97.0	91.7
Electronics	6.4	4.6	6.7	9.6	36.9	37.6	32.1	30.7	47.8	46.0	31.1	15.5	12.6
Computer Integrated Manufacturing	10.8	10.1	11.9	13.0	18.0	18.0	18.7	16.1	12.3	13.6	18.8	20.8	20.3
Material Design	0.3	1.3	0.6	0.7	0.6	1.2	1.5	1.3	2.6	4.3	12.2	14.8	2.5
Aerospace	96.6	140.6	154.5	63.4	72.7	63.4	120.8	291.5	243.6	374.7	259.3	445.6	433.4
Weapons and Nuclear	5.4	2.8	3.9	3.7	6.8	8.5	8.7	8.0	6.1	5.7	8.7	8.7	5.9
Total	**195.1**	**240.2**	**269.3**	**192.2**	**258.1**	**256.1**	**302.0**	**502.6**	**492.7**	**661.7**	**647.4**	**768.9**	**738.2**

% change from previous year

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Biotechnology	1.0	85.3	16.3	31.8	19.0	20.6	42.6	50.9	-31.9	22.6	186.1	-19.8
Life Sciences	-1.4	11.9	17.4	12.1	17.4	11.9	24.5	9.0	14.1	23.9	13.4	7.6
Opto-Electronics	-30.4	61.1	2.1	83.6	-6.8	31.6	1.4	-9.5	17.8	61.1	-8.6	17.4
Computers and Telecommunications	14.3	11.7	6.4	25.5	-6.1	-23.6	34.6	21.9	34.5	66.0	-47.5	-5.4
Electronics	-27.3	44.4	44.4	283.0	1.8	-14.6	-4.2	55.6	-3.7	-32.5	-50.0	-18.8
Computer Integrated Manufacturing	-6.4	18.1	9.8	37.7	0.1	4.1	-13.8	-24.1	11.0	38.3	10.5	-2.4
Material Design	371.4	-50.3	7.6	-15.1	94.6	33.0	-17.9	110.7	62.7	183.0	21.5	-83.2
Aerospace	45.5	9.9	-58.9	14.7	-12.8	90.4	141.4	-16.4	53.8	-30.8	71.8	-2.7
Weapons and Nuclear	-47.5	37.9	-4.1	82.4	24.8	3.0	-8.4	-23.9	-5.9	52.3	-0.3	-32.0
Total	**23.1**	**12.1**	**-28.6**	**34.3**	**-0.8**	**17.9**	**66.4**	**-2.0**	**34.3**	**-2.2**	**18.8**	**-4.0**

Source: BC STATS and Statistics Canada

Detailed Table 40. Balance of Trade in High Tech. Goods with the European Union, by Commodity Group, 1990-2002

	Balance ($ million)												
	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
Biotechnology	-1.3	-1.3	-2.5	-2.8	-3.8	-3.6	-5.6	-7.9	-11.8	-8.2	-10.1	-28.8	-23.0
Life Sciences	-29.5	-29.3	-33.0	-39.4	-44.5	-52.2	-59.0	-73.7	-78.1	-89.3	-112.7	-128.5	-130.5
Opto-Electronics	0.4	0.3	-0.5	1.2	-0.6	0.7	-1.1	2.1	4.0	4.8	11.7	19.4	-2.9
Computers and Telecommunications	-28.6	-35.2	-38.8	-38.1	-45.1	-44.1	-28.7	-44.6	-41.4	-74.6	-157.1	-65.7	-67.8
Electronics	-6.3	-4.6	-6.6	-9.3	-35.1	-35.7	-29.5	-23.9	-40.7	-32.9	4.0	4.1	-5.2
Computer Integrated Manufacturing	-10.0	-9.8	-11.5	-12.6	-17.1	-17.1	-17.8	-15.2	-11.7	-12.6	-17.7	-20.0	-19.2
Material Design	-0.3	-1.3	-0.6	-0.7	-0.4	-1.2	-1.5	-1.3	-2.6	-4.3	-11.9	-10.2	-2.5
Aerospace	-72.3	-135.6	-152.2	-52.1	-70.3	-58.9	-117.6	-289.3	-239.0	-368.8	-237.1	-415.6	-410.7
Weapons and Nuclear	-5.3	-2.7	-3.7	-3.4	-6.7	-7.4	-8.5	-7.9	-5.7	-4.5	-5.9	-8.3	-5.0
Total	**-153.2**	**-219.4**	**-249.5**	**-157.2**	**-223.7**	**-219.6**	**-269.2**	**-461.8**	**-427.2**	**-590.3**	**-536.8**	**-653.6**	**-667.0**

Note: The trade balance is the net of *total* exports minus total imports. Total exports include re-exports, whereas *domestic* exports are shipments of goods produced within Canada only (in the case of tables in this report, within BC only).

Source: BC STATS and Statistics Canada

Detailed Table 41. Export of High Technology Services, 1991-2001 [1]

Value ($ million)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
High Technology Service Exports											
Computer Services	35	78	163	163	208	208	237	456	686	906	956
Engineering Services	56	67	102	106	138	174	443	222	168	103	137
Total	**91**	**145**	**265**	**269**	**346**	**382**	**680**	**678**	**854**	**1,009**	**1,093**

% change from previous year

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
High Technology Service Exports										
Computer Services	120.3	109.0	0.0	27.6	0.0	13.9	92.4	50.5	32.0	5.5
Engineering Services	20.0	52.6	3.4	30.6	25.7	154.7	-50.0	-24.1	-38.9	33.1
Total	**58.9**	**82.9**	**1.3**	**28.8**	**10.3**	**78.0**	**-0.3**	**26.1**	**18.1**	**8.3**

1. Based on surveyed firms only.

Source: Statistics Canada

7 Appendix A: Defining the High Technology Sector

How was the sector definition arrived at?

In 1995, BC STATS and the Science and Technology Division of the Ministry of Employment and Investment[1] developed a definition of the high technology sector that focuses on standard industries that produce high technology goods and services as their ultimate outputs. The definition looked at the high tech outputs of various standard industries (industries defined in the Canadian Standard Industrial Classification–SIC), their level of research activity, their representation in existing lists of high tech companies, and the opinions of an expert panel drawn from government, university, and the private sector.[2] Data compiled under the North American Industry Classification System (NAICS) is now available for the industries viewed as high technology and the SIC data series have been discontinued. The switchover to the new classification system has allowed us to revisit the definition and update the list of industries that are deemed "high technology."

Using an approach that conforms to the industrial structure upon which Statistics Canada's data are compiled, it is possible to take advantage of the impressive array of data already collected by the national statistical agency and to create time series of data values.

Are all high tech companies included?

It is recognized that there are some drawbacks to the industry-based definition employed here. The first is that the NAICS does not fully recognize industries of the "new economy." As a result, new products and services are often grouped in an industry that primarily produces similar but distinctly different products and services.

Second, it is difficult to capture the full breadth of high technology or knowledge-intensive activity in the economy through NAICS-based definitions. Innovation is not unique to a specific group of industries, but can be found throughout the whole economy. Some firms on the "leading edge" will be missed if they are classified in industries that, in aggregate, fail to show high tech characteristics. On the other hand, it is impossible to remove those firms in the industries in the sector that lag behind the industry norm.

The industries included in the definition adopted for this profile represent the core of the high technology sector. While it is cer-

[1] Now the Science, Technology and Telecommunications Division of the Ministry of Competition, Science and Enterprise.

[2] The complete methodology is presented in Lawrance and Miller, Defining the British Columbia High Technology/Knowledge Sector, 1996. This paper is available at http://www.bcstats.gov.bc.ca/data/bus_stat/hi_tech.htm

tainly true that examples of creativity and innovation can be found in every industry, this definition, with its industry focus, includes only those industries where high technology activity is concentrated.

Exactly which industries are included?

The table below lists the industries that are defined, for the purpose of this report, to constitute the high technology sector.

Industries in the High Technology Sector

NAICS	Industry
Manufacturing Industries	
325189	Other Inorganic Chemicals
325410	Pharmaceutical and Medicine
333310	Commercial and Service Industry
334110	Computer and Penpheral
334210	Telephone Apparatus
334220	Radio, Television Broadcasting & Wireless Communications Equipment
334290	Other Communications Equipment
334310	Audio and Video Equipment
334410	Semiconductor and Other Electronic Components
334511	Navigational and Guidance Instruments
334512	Measuring, Medical and Controlling Devices
334610	Manufacturing and Reproducing Magnetic and Optical Media
335315	Switchgear and Switchboard, and Relay and Industrial Control Apparatus
335910	Battery
335920	Communication and Energy Wire and Cable
335990	All Other Electrical Equipment and Component
336410	Aerospace Products and Parts
339110	Medical Equipment and Supplies
Service Industries	
511210	Software Publishers
514210	Data Processing
541330	Engineering
541510	Computer Systems Design and Related

Note:
For the purposes of this report, the manufacturing NAICS industries are grouped together as "Manufacturing." Within this, details are reported for Pharmaceuticals and Aerospace, with the remaining industries covered under "other." Services are similarly grouped, with detail for "Information services" (NAICS 511210 plus 514210) and "Computer and engineering services" (NAICS 541330 plus 541510).

8 Appendix B: Defining High Technology Commodities

Defining high technology commodities

Developing a definitive list of what commodities should be considered high technology is a difficult exercise. Leading technologies are continually evolving and what is considered high technology today may be classified as low tech tomorrow. As a result, the definition of high technology commodities must necessarily change over time. This means that data regarding high technology trade from 1990 may contain commodities that are no longer included in the 2002 definition. However, this does not mean that this data cannot be compared over time. It is still valid to look at growth rates over that period as long as it is clear that the rates represent growth in the changing definition of high technology, rather than a static basket of goods.[1]

Starting with this 2003 edition of the *Profile of the British Columbia High Technology Sector*, the definition of which commodities are to be considered high tech has been revised. In the past, BC Stats' definition of high technology commodities used a list of six-digit harmonized system commodity codes matching that of the U.S. Bureau of the Census' advanced technology products (ATP) list.[2] The reason for using codes at the six-digit level was due to the fact that Canadian and American classifications are identical at this level, but at more disaggregated 8- and 10-digit levels the codes differ. It was thought that trying to define high technology at a more disaggregated level would be too onerous a task.

Note: *Starting with this edition of the* Profile of the British Columbia High Technology Sector, *the definition of high tech commodities has been revised.*

More recently, BC Stats did some analysis of the data and determined that the six-digit level definition was simply too inclusive and inflated the true value of high technology trade substantially. Accordingly, a painstaking effort was made to match the American codes to Canadian codes at the 8-digit level for exports and 10-digit level for imports. In many cases the codes matched exactly and no further effort needed to be expended. However, in other

[1] One technical limitation that may cause difficulty in temporal comparisons is when there are changes to the definition of Harmonized System codes. When this occurs, there may be a resulting unintended change to the high technology commodity definition. This is due to the fact that the code may now include or exclude commodities that it did not previously, such that these goods can no longer be separated out (or perhaps can be more finely defined, so that low technology commodities that previously had to be included can now be expunged from the definition). However, these changes are usually small and should not have a significant impact on the data.

[2] For a discussion of the development and content of this list, see: McGuckin, Robert H., Thomas A. Abbott, Paul Herrick, and Leroy Norfolk. 1991. *Measuring Advanced-Technology Products Trade: A New Approach*. US Bureau of the Census.

cases there was not an exact match, particularly for exports, which are coded to only 8 digits. For these commodity groups, further analysis was undertaken using available data from the U.S. Bureau of the Census and Statistics Canada to determine whether or not the majority of these codes were high technology (as defined by the ATP list). If it was judged that this was not the case, the commodity was excluded from the high tech definition. While this may result in some high technology products being excluded from the definition, it should be balanced to some extent by those commodity classifications that, although they are mainly high technology, still include some "low tech" goods. Since the ATP list itself is defined using classification codes, this kind of trade-off is already present in the definition. No exact measure of high technology trade is possible to achieve since high technology is subjective to begin with, but this new definition should be much more in line with what most people would agree is high technology.

Trade figures from this publication should not be compared to previous editions published by BC Stats

It should be stressed that these figures should not be compared to those previously published by BC Stats since the new definition is far more exclusive and the numbers are significantly lower than those calculated based on the old definition.

Note that a commodity need not be produced by one of the industries included in the high technology definition in order to be considered a high technology product. Some industries not included in the high tech definition, because they mainly manufacture low technology goods, may also manufacture some high technology products. Conversely, it is possible for those industries classified as high technology to also manufacture some products that are considered low tech.

Calculating BC consumed imports

At this time, Statistics Canada does not produce data on imports by province of consumption, rather, only by province of clearance. An estimate of BC consumed imports was derived using the consumption of Canadian imports of those commodities by the BC economy and applying this ratio to total Canadian imports.

Data source

Data for trade in goods are supplied by Statistics Canada and are provided through the Trade Research and Inquiry Package (TRIP) computer reporting system at BC Stats. TRIP offers user-defined tabulations of export or import statistics for British Columbia, Canada, the United States and other countries. Tabulations can include information on commodities, countries, US states, years, months, mode of transport, etc.

Commodity groups

The U.S. Bureau of the Census has defined ten fields involving advanced or high technology commodities. Each field represents a large number of products and processes that are considered to be on the leading edge. These fields have been used to classify exports in this report.

Aerospace

Technological developments in this field include advances that allow planes to fly further, faster, higher, to use less fuel, and to have quieter engines. Many of the advances have been adapted to military applications, such as vertical take-off aircraft and aircraft that require shorter distances for takeoff and landings.

Biotechnology

Biotechnology covers recent developments in recombinant deoxyribonucleic acid (DNA) research and genetic engineering. Obvious examples include drugs, enzymes, and other therapeutic items. Common applications include agricultural production, and the use of microorganisms for the production of drugs and other complex molecules.

Computer and Telecommunications

This field covers technological advances affecting both computers and telecommunications hardware products. The primary advances in this field are in developing hardware that can process information more quickly. Important breakthroughs are expected in the areas of artificial intelligence and parallel processing.

Computer Integrated Manufacturing

This field includes developments in robotics and numerically controlled (NC) machines. These products have a significant impact on industrial automation. Robots and NC machines perform increasingly sophisticated operations through developments in sensory and visual capabilities of machines. With these breakthroughs, the manufacturing processes have increased in flexibility and require less human intervention to operate and maintain production machinery. Many of the new automation technologies are made possible because of breakthroughs in the application and development of faster, smaller components.

Electronics

The miniaturization of electronic components is the most important recent technological advance in the field of electronics. Some technologies included are integrated circuits, semiconductors, such as transistors and diodes, as well as new developments in surface mounting of electronic components such as capacitors and resistors.

Life Sciences (Medical)

This field encompasses the application of scientific advances to medical sciences. Recent advances such as nuclear resonance imaging, echo cardio-graphs, and total-patient monitoring systems are examples of products developed from recent technological advances in this field. Also, recent increases in the strength of materials and reductions in their weight have led to improved internally implemented fixation devices and prostheses.

Materials Design

Materials design includes the newest methods of production for products that already exist in the market as well as the development of new products. Recent examples of technological advancements include high temperature superconductors, advanced polymers that expand the areas of plastic use, and new ultra clear glass that allows fibre optic cable to be used for long distance communication.

Nuclear Technology

This field covers developments in nuclear power production and primary nuclear reactors. It includes newly designed reactor components that improve the safety and efficiency of nuclear power plants. It also includes developments in the creation and packaging of nuclear fuel, the application of atomic physics to medical and other areas of science.

Opto-Electronics

Opto-electronics is generally defined as the expanded development and application of the laser. Also included are recent advances in photoelectric cells and diodes, photographic and other imaging equipment, and fibre-optic cables.

Weapons

This field covers all advanced methods used for the development, guidance, and control of weapons intended for national or personal protection and deterrence. Many of the developments in this area are the result of breakthroughs in computers and telecommunications as well as aerospace technologies.